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ABSTRACT

This book summarizes approximately 600 reports of reading research identified between July 1, 1991 and June 30, 1992. Research studies in the book are categorized into six major areas: (1) summaries of reading research; (2) teacher preparation and practice; (3) sociology of reading; (4) physiology and psychology of reading; (5) the teaching of reading; and (6) reading of atypical learners. All but the first category in the book are further subcategorized, and individual studies within subcategories are grouped by subject. An author index and a list of journals, conference proceedings, and yearbooks monitored conclude the book. (RS)



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# Annual Summary of Investigations Relating to Reading

July 1, 1991 to
June 30, 1992

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Sam Weintraub

CS 011 322



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# *Annual Summary of Investigations Relating to Reading*

## *July 1, 1991 to June 30, 1992*

Sam Weintraub
*State University of New York at Buffalo*
Editor

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## *Abbreviations Used in the Annual Summary, 1991-1992*

Abbreviations have been used with certain terms and test names that appear frequently in reading research reports. The terms, test names, and abbreviations employed are listed below.

### TERMS

| | |
|---|---|
| ANCOVA | Analysis of Covariance |
| ANOVA | Analysis of Variance |
| CA | Chronological Age |
| CAI | Computer Assisted Instruction |
| CRT | Cathode Ray Tube |
| DRA | Directed Reading Activity |
| DRTA | Directed Reading-Thinking Activity |
| EH | Emotionally Handicapped |
| EMR | Educable Mentally Retarded |
| ESL | English as a Second Language |
| GPA | Grade Point Average |
| IQ | Intelligence Quotient |
| L1 | First Language |
| L2 | Second Language |
| LD | Learning Disabled |
| LVF | Left Visual Field |
| MA | Mental Age |
| MANOVA | Multivariate Analysis of Variance |
| RA | Reading Age |
| RD | Reading Disabled |
| RT | Reaction Time |
| RVF | Right Visual Field |
| SES | Socioeconomic Status |
| VF | Visual Field |

### TESTS

| | |
|---|---|
| ACT | American College Test |
| CAT | California Achievement Test |
| CTBS | Comprehensive Tests of Basic Skills |
| DRP | Degrees of Reading Power |
| GMRT | Gates-MacGinitie Reading Tests |
| GORT | Gray Oral Reading Test |
| IRI | Informal Reading Inventory |
| ITBS | Iowa Test of Basic Skills |
| ITPA | Illinois Test of Psycholinguistic Abilities |
| MAT | Metropolitan Achievement Tests |
| MRT | Metropolitan Readiness Test |
| NARA | Neale Analysis of Reading Abilities |
| NDRT | Nelson-Denny Reading Test |
| PIAT | Peabody Individual Achievement Test |
| PMAT | Primary Mental Abilities Test |
| PPVT | Peabody Picture Vocabulary Test |
| RMI | Reading Miscue Inventory |

| | |
|---|---|
| RPM | Raven's Progressive Matrices |
| SAT | Stanford Achievement Tests |
| Schonell | Schonell Graded Word Reading Test |
| SDRT | Stanford Diagnostic Reading Test |
| SIT | Slosson Intelligence Test |
| Spache DRS | Spache Diagnostic Reading Scales |
| SRA | SRA Achievement Series |
| TORC | Test of Reading Comprehension |
| WAIS-R | Wechsler Adult Intelligence Scale – Revised |
| WISC-R | Wechsler Intelligence Scale for Children – Revised |
| WJPEB | Woodcock-Johnson Psycho-Educational Battery |
| WPPSI | Wechsler Preschool and Primary Scale of Intelligence |
| WRAT | Wide Range Achievement Test |
| WRMT | Woodcock Reading Mastery Test |

A microfiche edition of this *Annual Summary of Investigations Relating to Reading* is available. Annotated citations are provided in author and subject sequences on eye-readable, 4 x 6 cards; the full-text documents are reproduced on 4 x 6 high-quality microfiche which utilizes an exclusive image indexer. Printed author and subject indexes are included, and a demonstration workshop is available to train staff and students in the use of the collection. For further information about the microfiche edition of the *Annual Summary* or any previous *Summary*, contact the Alvina Treut Burrows Institute, PO Box 49, Manhasset, NY 11030. Phone 516-869-8457.

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# *Annual Summary of Investigations Relating to Reading July 1, 1991 to June 30, 1992**

SUMMARIZES approximately 600 reports of reading research identified between July 1, 1991, and June 30, 1992. The research studies are categorized into six major areas, five of which have been further subcategorized. As in previous years, the majority of studies reported were classified into the Physiology and Psychology of Reading area. The largest subdivisions within that category continue to be Comprehension Research and Factors Related to Reading Disability. The largest subcategory in the Sociology of Reading is concerned with the content analysis of printed materials. Under the Teaching of Reading category, the testing subcategory remains the largest. A listing of other general bibliographies of reading research appears as the first major category of the present summary.

## *Order of Studies Within Subcategories*

STUDIES in the Annual Summary are subcategorized under five of the six major categories (Category 1 consists of general reviews only and is not subcategorized). Within any one subcategory will appear a number of loosely related studies. While all the research within one category falls under the same general rubric, the studies will vary markedly in emphasis, in the question being addressed, and/or in the focus. Thus, studies have been grouped within subcategories also. For example, under Factors Related to Reading Disability, those studies that address dyslexia appear together, while those that deal with strategies used by good and by poor readers would be placed in juxtaposition. The reader looking for research on one particular aspect of reading disabilities would then find them all in one spot rather than dispersed haphazardly throughout the subcategory as might be the case if they were listed alphabetically by author.

*Materials for inclusion were identified by two individuals: James Schwartz and Ellen Friedland, former doctoral students at SUNY at Buffalo. Both have been most conscientious and competent in their efforts. Margaret Collins is the efficient secretary who keeps track of all the summary materials and presses me to get things done. To those individuals, I am deeply indebted. In addition, thanks are due to our responsible, industrious work-study student, Shou-Su Yu. Financial support for the annual summary is provided by the International Reading Association.

## *I. Summaries of reading research*

DURST, RUSSELL K., & MARSHALL, JAMES D. (1991, December). Annotated bibliography of research in the teaching of English. *Research in the Teaching of English, 25,* 497-509.

Presents annotations of research in the teaching of English under four main headings: Writing, Language, Literature, and Teacher Education. The first two categories are further subdivided. The article was prepared with the cooperation of the ERIC Clearinghouse on Reading and Communication Skills. In addition to ERIC documents, the listing cites dissertations and journal articles. ERIC document number and University Microfilm numbers are included.

LARSON, RICHARD L., & BECHAN, ANN. (1992, May). Annotated bibliography of research in the teaching of English. *Research in the Teaching of English, 26,* 211-224.

Cites and annotates research in the teaching of English under five major categories: curriculum, language, literature, teacher education, and writing. The items included are selected, in general, from sources published from July to December preceding the article's appearance. Longer annotations are given for those studies considered to be of more than usual interest. Several of the major categories are subgrouped.

WEINTRAUB, SAM; SMITH, HELEN K.; ROSER, NANCY L.; MOORE, WALTER J.; JONGSMA, KATHLEEN S.; DOYLE, MARY ANNE E.; CEPRANO, MARIA A.; & GRAHAM, DIANE M. (1992). In Sam Weintraub (Ed.), *Annual summary of investigations relating to reading, July 1, 1990 to June 30, 1991.* Newark, DE: International Reading Association.

Identifies, abstracts, and categorizes reports of reading research identified in the period from July 1, 1990, to June 30, 1991. The research is categorized under six major areas, five of which are further subcategorized. Major categories include: summaries of reading research, teacher preparation and practice, sociology of reading, physiology and psychology of reading, teaching of reading, and reading of atypical learners.

## *II. Teacher preparation and practice*

### II-1 Behavior, performance, knowledge, practices, effectiveness

THOMAS, KAREN F.; BARKSDALE-LADD, MARY ALICE; & JONES, REBECCA A. (1991). Basals, teacher power, and empowerment: A conceptual framework. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 385-397). Chicago, IL: National Reading Conference.

Derives data on issues of teacher power, influence, and empowerment from interviews with teachers who had just completed the 1989-1990 school year using a new 1990 basal reading series. Sample comprised 12 elementary teachers with teaching experience ranging from 4 to 25 years from rural and suburban school districts. Teacher interviews lasted one to two hours and used an open-ended and semistructured question format. Teachers were asked to discuss their perceptions and beliefs about their use of the basal in reading

instruction as well as their planning strategies. Interviews were transcribed, segmented into idea units, and categorized. Without exception, the basal was the instrument of choice for planning reading instruction. Although teachers presented themselves as the agent of power and influence in reading instruction, they abdicated their power to the basal. In essence, teachers had power but were not empowered.

BRUNEAU, BEVERLY J., & AMBROSE, RICHARD P. (1992, Spring). Kindergarten and primary teachers' perceptions of whole language instruction. *Journal of Reading Education, 17,* 52-62.

Surveys teachers' perceptions of whole language instruction. Twenty-eight kindergarten through second grade teachers in a suburban midwestern school district responded to open-ended questions about their familiarity with whole language as well as concerns about its implementation. Categorical analysis of responses revealed most teachers had first learned about whole language through university programs or through other teachers. Whole language was generally perceived as a set of beliefs supporting integration of content learning experiences while developing reading and writing in conjunction with the child's language abilities. Activities most frequently noted as used by whole language teachers were journal writing, sharing class stories, and writing poetry. Teachers also indicated their need for workshops enabling expansion of their knowledge of whole language.

PACE, GLENNELLEN. (1992, March). Stories of teacher-initiated change from traditional to whole-language literacy instruction. *The Elementary School Journal, 92,* 461-476.

Examines factors that promote or impede grass-roots change efforts in elementary schools, specifically teachers' attempts to shift from a traditional textbook, teacher-centered language and literacy curriculum to learner-centered, whole-language approaches. Classroom observations, conversations with the teachers over time, and observations of their interactions with colleagues were used to record and revise these "stories" of change. All of the teachers had initiated innovations within their own classrooms, generally in response to their own changing knowledge. Three sources of tension were revealed by the teacher innovators: (1) tension between an old paradigm or belief system about language and learning and new ideas, requiring a paradigm shift; (2) tension between new instructional strategies and the maintenance of the in-place curriculum; and (3) tension between the teacher engaged in change and other teachers resistant to change. The teachers' experiences suggested that the dynamics of colleague hostility or support play a major role in school reform.

JOBE, RONALD, & HART, PAULA. (1991, Fall/Winter). The basalization of children's literature. *Reflections on Canadian Literacy, 9,* 147-150.

Examines the literature-related activities designed by 37 teachers enrolled in two children's literature classes at the University of British Columbia. Teachers were asked to identify picture books or novels they would use with their students, to give reasons for choosing each book, and to devise appropriate book activities. The assignment netted 65 picture books with 313 activities, and 35 novels with 255 accompanying activities. Approximately 44% of the picture book activities, and 52% of the novel-related activities were judged directly related to exploration of the book as a unique experience. Five different categories of picture book activities emerged: oral, writing, art, research, and drama, as well as a miscellaneous category. The greatest number of picture book activities were in the oral mode, and 43% were judged as dealing directly with the book. Overall, 8.6% of the activities were linked to both other books and to life experiences. Seven categories were devised to describe the activities which accompanied novels: research, writing, oral, art, drama, mapping, and charting, in addition to a miscellaneous category. Research activities

were the most dominant (23%), followed by activities requiring the written mode (21%) and the oral mode (20%). For novels, 9% of the activities were related to other books and 4% were related to life experiences. The highest degree of match (100%) between activity and book exploration was for the 22 drama activities and the 3 charting activities, but only about half of the activities were judged as exploratory—directing attention back to the book.

TULLEY, MICHAEL A. (1991-1992, Winter). Learning to teach with a new basal reading program. *Journal of Reading Education, 17,* 12-22.

Examines elementary teachers' experiences and perceptions during their first year with a newly-adopted basal reader. In an attempt to discover how long it takes teachers to learn to use a new basal, whether length of experience or grade level taught influences that learning process, and which aspects of using a new basal presents greatest difficulties, the researcher interviewed 54 kindergarten through grade 5 teachers from five Indiana schools and surveyed 75 teachers. Interviews were conducted after one semester of implementation and surveys after seven months. Survey data indicated that over half (56%) of the respondents reported that it takes one school year or more to learn to use a new basal; 25% indicated that a period of from one to three months is necessary. Perception of length of learning time for gaining familiarity was related more to grade level taught than to years of teaching experience. The highest percentages of teachers who indicated that a full year or more of learning was needed were at the lower grades. Learning to use the organization of the teachers' manual was judged as the greatest difficulty teachers encountered (91%), followed by learning to make use of the program's flexibility (87%).

MEYER, LINDA A.; LINN, ROBERT L.; & HASTINGS, C. NICHOLAS. (1991, Winter). Teacher stability from morning to afternoon and from year to year. *American Educational Research Journal, 28,* 825-847.

Presents results of classroom observations of kindergarten and first grade teachers from three school districts to determine the stability of teaching behaviors across time and groups of pupils. Nine full days of observations were completed for each of five half-day and six whole-day kindergarten teachers, as well as for 12 first grade teachers over two consecutive school years, to determine stability of time spent and frequency of interactions during (1) reading, (2) story reading, and (3) all instruction. Data were collected by a team of up to 12 observers who taped all instructional activities while making field notes. Observations of morning and afternoon kindergarten classes indicated stability in the amount of time devoted to reading across both years, and between teachers' morning and afternoon classes. In addition, year-to-year comparisons were presented for teachers of full-day kindergarten classes, as well as for first grade teachers. First grade teachers tended to fluctuate more in their time allocated to reading and all instruction than did their kindergarten colleagues. Coefficients of correlation for kindergarten and first grade teachers for morning/afternoon and year-to-year frequencies of decoding interactions were all above .88 and significant. Changes over the school year were judged as planful, reflecting differences in pupil ability from beginning to end of a school year. Discussion focused on the greater likelihood of stability for half-day kindergarten teachers than for first grade teachers.

MCCORMICK, SANDRA; COOTER, ROBERT B., JR.; & MCENEANEY, JOHN E. (1992, April). Assessment of disabled readers: A survey of current teacher beliefs and practices. *Journal of Reading, 35,* 597-599.

Reports findings of a survey sent to a random sample of IRA members, including 159 classroom teachers and 143 remedial reading teachers. Replies were received from 227 respondents. The survey consisted of seven sections, the first five of which included closed-form questions on the following topics: teachers' perceptions of assessment, tests and proce-

dures used by teachers, tests/procedures teachers were qualified to administer, and tests/procedures teachers felt most accurately identified approximate reading levels of pupils and their strengths and needs. The last two sections of the instrument consisted of open-ended questions about assessing disabled readers and about innovative assessment approaches being used. More reading teachers than classroom teachers felt that they had an adequate knowledge base for using assessment results. Instruments and procedures most frequently used were daily informal observations; writing samples; standardized achievement tests; literature response projects; and measures of reading attitudes, interests, and habits. Rarely or never used were such measures as published diagnostic tests, miscue inventories, and screening instruments for early detection of reading difficulties. Identified as most accurate for estimating instructional levels or for determining disabled readers' specific instructional needs were daily informal observations, portfolios, IRIs, running records, writing samples, process-oriented assessment, literature response projects, miscue inventories, and student-dictated stories. Most inaccurate assessment devices and procedures were felt to be skill sheets, standardized tests, end-of-level basal tests, process-oriented assessment, and measures of amount of recreational reading. Most frequently mentioned innovative approaches for assessment were writing and portfolios, whole language assessment methods, Reading Recovery methods, informal assessment measures, and standardized testing. Included among the questions reading teachers would like to have answered were how assessment information can be translated into instructional practice and what research and practice indicated as the best approach to assessment.

GOVE, MARY K., & KENNEDY-CALLOWAY, CONNIE, (1992, April). Action research: Empowering students to work with at-risk students. *Journal of Reading, 35,* 526-534.

Describes the procedures and participants in an action research project designed to improve the learning of at-risk students within the regular classroom setting. Paired investigators (representing classroom teachers, specialists, and an elementary principal) collected descriptive baseline data from students as the educators taught a two-week content unit using reading/writing strategies. The intervention was also a two-week unit in which some hypothesis about the students' learning was tested. Teams collected, analyzed, and reported student data. In addition, the authors studied the teacher-researcher teams to determine the effect of conducting action research on these participants. All participants were interviewed. Three themes emerged from the transcripts as participants' perspectives on action research: (1) renewed interest and enthusiasm for teaching; (2) increased collegiality; and (3) focused, nonthreatening data-based feedback conditions. Four prototypic participants in the 1990-1991 program were described as examples on a continuum of knowledge/beliefs. The researchers concluded that the impact of the research experience was directly related to the educators' stages of functioning concerning their knowledge and beliefs about reading and writing.

COLADARCI, THEODORE. (1992, Spring). Teachers' knowledge of what students know: The case of reading. *Reading Improvement, 29,* 34-39.

Summarizes findings of various studies that addressed the accuracy with which teachers make judgments about their students' achievement in reading. A conclusion emerging from the research is that there is a moderately strong correspondence between teacher judgment and actual student achievement in reading. Factors affecting accuracy of teacher judgment are: the teachers' ability to make judgments, the task being judged, and whether the person being judged is a high or low ability student.

JOHNSTONE, JUDY RAMOY. (1990). A comparison of ratings of student performance by supervising teachers, reading specialists, and preservice teachers. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 37-42). Pittsburg, KS: College Reading Association.

Compares the evaluations of junior and senior preservice teachers, supervising teachers, and reading specialists who observed student performance using a modified DRTA. The four groups used in the study were: 12 elementary education juniors who had just completed a reading methods course, 18 elementary seniors who had completed student teaching, 13 supervising teachers, and 28 reading specialists employed in schools where field experiences took place. A videotape was made of a student teacher using the modified DRTA with a group of fifth grade pupils. It was shown on separate occasions to each group of evaluators who rated students in nine competencies related to teaching in general and specific to the modified DRTA steps. Analyses of variance were conducted across the four groups for each competency and for the global score. Reading specialists consistently rated children's performance lower on all areas and the total score. There was agreement among the juniors, seniors, and supervising teachers for each of the six competencies related directly to the DRTA.

ANDERS, PATRICIA L. (1991). The relationship between reading practices literature and teachers' talk about practices. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 211-217). Chicago, IL: National Reading Conference.

Compares comprehension instructional practices found in literature to practices teachers talked about during staff development sessions. Twelve teachers (grades 4-6) and two specialists from two schools participated in a series of staff development sessions designed to allow teachers to examine their explanations for the practices they employed in relation to empirical practices drawn from the literature review. Two staff development sessions were selected from each school for analysis of the nature of teachers' theoretical talk around practices. All sessions were videotaped and analyzed. The review of literature resulted in the identification of 100 studies that described and tested 73 comprehension practices for grades 4-6. Results suggest a dichotomy between teachers and literature. The foci of the studies reviewed (text characteristics, vocabulary, and background knowledge) were different from those discussed by the teachers (questioning and student motivation). Practices found frequently in literature review (e.g., vocabulary) were never discussed by teachers. Similarly, discussion topics that ranked high (e.g., motivation) were not the foci of the teacher-directed literature.

CHASEN, STEVEN P., & GAMBRELL, LINDA B. (1992). A comparison of teacher read aloud practices and attitudes: 1980-1990. *Literacy: Issues and Practices, 9,* 29-32. College Park, MD: Maryland Reading Association Council.

Compares teachers' (K-3) responses to a survey distributed in 1980 (n=69) and again in 1990 (n=52) to determine whether there were significant changes in teacher practices and attitudes toward reading aloud to students. In the 1980 study, all teachers reported using the basal program as the primary basis for reading instruction. In the 1990 survey, 70% of the teachers reported using basals, but over half of these teachers supplemented the basals with children's literature. A significant increase in daily reading aloud to pupils was found from 1980 (45%) to 1990 (73%).

AFFLERBACH, PETER, & SAMMONS, REBECCA BELL. (1992). Report cards in literacy evaluation: Teachers' training, practices, and values. *Literacy: Issues and Practices, 9,* 10-18. College Park, MD: Maryland Reading Association Council.

Focuses on teachers' training, practices, and values for using report cards to communicate their knowledge of students' literacy achievement. Forty-eight teacher volunteers (34 elementary, 10 middle/secondary, and 4 college level) from ten school districts completed a questionnaire designed to elicit information on teachers' training, actual practices, and values related to developing and utilizing report cards. The majority of teachers (71%) reported that they received no training related to developing or writing report cards. Most of the participants (94%), although they used report cards, had no part in creating them. The most frequently cited purpose for the report card was to communicate students' progress to parents or guardians. It is suggested that while report card use is widespread, teachers receive little training in writing report cards and often are excluded from the process of designing them.

THOMPSON, DEBORAH L., & HAGER, JANE MEEKS. (1991). Assessing teachers' knowledge of multi-ethnic literature. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local.* (pp. 21-29). Athens, GA: American Reading Forum.

Surveys elementary teachers' knowledge of and uses for multiethnic literature. Sample comprised 20 graduate students and 30 elementary teachers from an innercity school where a literature-based approach to reading instruction was used. Teachers were asked to respond to a list of titles representing a variety of genres and whether they were used for classroom instruction, recreational reading, classroom research/referencing or as read alouds. The majority of teachers were not familiar with multiethnic literature except for a few African American titles. Native American and Hispanic American titles drew the fewest responses in terms of familiarity. When teachers were familiar with the books, they were used primarily for recreational reading and as read alouds.

CORNELIUS, GEORGIANA. (1991, Winter). Literacy practices of the early childhood educator. *New Mexico Journal of Reading, 11,* 19-23.

Identifies the reading readiness practices of early childhood educators in day care and kindergarten settings. The sample included 72 experienced teachers selected randomly from Milwaukee, Wisconsin, schools. Thirty-six kindergarten teachers, 26 nursery/day care workers, and 9 early childhood special education teachers agreed to participate. All subjects completed a 50-item 5-point Likert style questionnaire. Teachers indicated their frequency in using instructional activities related to: variety of print, oral language ability, concrete experiences, relation of spoken and written language, story structure, use of prediction, use of literature, adult support and feedback, characteristics of the environment, and characteristics of the teaching schedule. Analyses of the data involved descriptive summary, factor analysis, and Pearson product moment coefficients. Results revealed high occurrences of instructional practices related to the areas of variety of print activities, oral language, and concrete experiences. Low frequencies of practice were indicated for instructional practices that entailed attention to the relation between written and spoken language, instruction focusing on a story structure, use of prediction, use of dramatic play, and activities for pleasurable reading. The correlational analysis revealed that age and years of teaching experience had positive relations with the frequency of literacy practices. More experienced teachers tended to provide and create more opportunities for children through a variety of literacy activities.

BARCLAY, KATHY. (1992, Spring). Let's get together pre through three. *Illinois Reading Council Journal, 20,* 32-37.

Surveys 365 preschool and primary teachers in the state of Illinois to determine their views and perceived needs for building effective literacy programs for young children. Findings showed primary grade teachers lack a sense of identity with early childhood educa-

tors, although both groups expressed a desire to affiliate with one another. Most kindergarten through grade three teachers reported using some form of integrated curriculum approach, use of learning centers, and small group instruction. Limited use of basal readers was reported by most K-3 respondents. Respondents also reported extensive use of cooperative grouping strategies as opposed to limited use of ability grouping.

ALLEN, DIANE D. (1991, Fall). Modeling methodology: Response journals in a reading methods course. *Journal of Reading Education, 17,* 26-34.

Describes a study using response journals as a means of responding to the reading methods textbook used in a preservice course. Twenty-two preservice teachers enrolled in a reading methods course were asked to respond in journal format as they read assignments in their text. Journals were read and evaluated weekly. Each sentence in a journal was counted as one response and placed into one of eight predetermined categories. The greatest number of responses (39%) were categorized as affective and included opinions related to the material, feelings about the information, and value judgments. Comments relating personal experiences or prior knowledge accounted for the next greatest proportion of responses, 23%. Responses relating to text structure and to metacognition totaled only 1% and 2%, respectively. Restatement of textual information gradually decreased as the course progressed, and by the end of the study students were using the journal as a means of reflecting more than as a notetaking tool.

JACOBSON, JEANNE M. (1992, Spring). Analyzing questions about professional literature based on the RESPONSE study strategy. *Reflections on Canadian Literacy, 10,* 13-19.

Classifies questions elicited from 25 graduate education students who were asked to use the study strategy RESPONSE. The strategy is defined as an interactive study process in which students make notes as they read in three categories: important points, questions, and new terms. The teacher then responds in writing or orally to the points raised. Prior to meeting with the researcher, the participants (all enrolled in a graduate reading course) were given a copy of an article and a RESPONSE form with directions. Students brought the completed forms to the first class session. Questions formed the content for discussion and lecture and also were addressed in written form. Questions were categorized on the basis of focus (text versus self), breadth (macrolevel, microlevel, or peripheral), and stance (neutral, opinion-implicit, or opinion-explicit). A total of 101 questions were turned in, 94 of which were different. Over half of the questions were text-focused (n=59), while 42 were self-focused. The preponderance of questions were classified as microlevel. Opinion-implicit questions occurred approximately twice as often as neutral stance questions, with six questions classified as opinion-explicit.

STURTEVANT, ELIZABETH G., & SPOR, MARY W. (1990). Student teacher use of content reading strategies. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 25-30). Pittsburg, KS: College Reading Association.

Looks at 23 secondary student teachers' use of content reading strategies and whether cooperating teachers' knowledge of content strategies influence classroom use. Subjects were secondary student teachers (mean age=28) who had taken a four-credit course in secondary content reading methods a year prior to student teaching. Student teachers completed a survey at the end of their student teaching experience asking them to rate the frequency of use of 29 strategies (text-based, study/research skills, vocabulary). Additional questions addressed the teaching environment and the attitudes of cooperating teachers/student teachers toward the strategies. Results suggest that only a limited number of strategies

learned in the preservice course were later used during student teaching. Of 29 strategies taught, only 7 were used once a month or more by 20% of the teachers. Strategies were used at least once a month in the areas of English (30%), Spanish (25%), art (15%), business (11%), and social studies (11%). A difference in use was found between student teachers whose cooperating teachers were familiar with the strategies (19%) versus those who were not (81%).

THOMAS, KAREN F., & RINEHART, STEVEN D. (1990). Content area reading practices: Relationships of teacher usage and ability. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 63-72). Pittsburg, KS: College Reading Association.

Explores the nature of what content teachers perceive as their ability to use reading practices and the implementation of these practices. Subjects were 129 secondary teachers in a large Mid-Atlantic school district. A questionnaire provided background information and the frequency of use and perceived ability to use 25 instructional practices. Teachers were asked to rate usage and ability on a scale of 0 (never/cannot do) to 10 (always/can do very well). Highest ranked items for both usage and ability involved instructional aspects of content reading such as questioning, activating prior knowledge, and self-monitoring during reading. Low-ranked items tended to involve assessment practices or aspects of the role such as using readability formulas, analyzing text appropriateness, and assessing student reading levels. Pattern indicates that teachers generally recognize the value of the practices but may lack the skills to use them. Inconsistencies were noted in reported use versus ability for males and content areas, suggesting that ability may not match usage.

JOHNS, JERRY L., & DAVIS, SUSAN J. (1991). Perceptions of preservice and inservice teachers regarding test-taking procedures and test-wiseness programs. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 121-128). Pittsburg, KS: College Reading Association.

Surveys 62 preservice teachers and 71 inservice teachers regarding their knowledge of testtaking and test-wiseness programs. Two-thirds of the groups represented primary, intermediate, and reading or learning disabilities classrooms, while the other third were secondary teachers. Sixty percent of the inservice teachers held master's degrees and more than half had taught ten years or more. The 11-item survey required respondents to circle agreement on a 5-point Likert scale. Findings reveal that both preservice and inservice teachers could profit from more knowledge about standardized administration procedures and the differences between standardized versus teacher-made tests. More than 20% of the inservice teachers and nearly 50% of the preservice teachers were not certain that directions for standardized tests should be read verbatim. More than a third of the inservice teachers and over half of the preservice teachers thought it was appropriate to assist poor readers by reading the standardized items aloud.

LONG, JUDITH L., & STEFFREY, SUSAN B. (1991). A survey of teachers' attitudes toward and utilization of computers in K-8 classrooms. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 147-152). Athens, GA: American Reading Forum.

Determines the extent of computer use by 47 elementary and 52 middle school teachers and examines overall teachers' attitudes toward the use of the computer as an instructional tool. The elementary teachers surveyed (n=99) were from rural schools with varied teaching experiences. Survey questions provided data on computer access, computer experience, frequency and use in the classroom, and attitudes/beliefs about computers. Results indicated that 93% of those teachers who responded had access to computers in their

school. The majority of teachers (82%) considered themselves computer literate via formal courses; however, only about half (57%) actually used the computer in their classrooms. The computer was used mainly for instructional follow up (65%), drill and practice (72%), and educational games (63%). Scheduling problems and limited software were listed as deterrents for computer use.

JONES, GLENOWYN. (1991, Spring). Survey of information levels and attitudes toward the teaching of reading and writing. *Michigan Reading Journal, 24,* 15-21.

Surveys the teachers of one Michigan school district relative to their understanding of the State Board of Education's definition of reading and their awareness of recent changes in the instruction and assessment of reading. Subjects included 355 professionals from 21 schools. The questionnaire included items addressing appropriate literacy levels for students, definition of reading, inservice activities, teaching reading to secondary students, preferred reading strategies, and knowledge of the writing process. Responses were tallied and percentages were reported for all respondents and for the two major groups of the sample: elementary teachers (grades K-6) and secondary teachers (grades 7-12). Results indicated that fewer than half of the educators (39%) knew the state's definition of reading. Forty-two percent of the elementary teachers and 74% of the secondary teachers had not had any inservice on the definition of reading. Thirty percent of the secondary teachers indicated that students should receive extra help if they have not learned to read. Overall, 96% felt that teachers other than those in the language arts department should teach their students how to write in their content areas. Sixty-two percent of the educators did not know any component of the writing process. Of those who knew the writing process, 14% did not encourage their students to use it when writing. Many teachers (86% of the elementary and 84% of the secondary) indicated interest in attending workshops on the writing process. Finally, grade levels of proficiency indicated most frequently as denoting literacy were sixth (18%) and eighth (17%).

SHIELD, MAL. (1991, February). Mathematics textbooks: How are they used? *Australian Journal of Reading, 14,* 60-68.

Explores teachers' and students' uses of mathematics textbooks during one week of instruction. Seven teachers of Year 8 mathematics classes and their students participated in this study. Data were collected using four researcher-designed instruments and through interviews with the teachers. All questionnaires were administered initially; teacher interviews were conducted after all other data were summarized. Data were collected during five successive lessons. Results of the study indicated that the textbook was important in preparing lessons for six of the seven teachers. All used other sources in at least some of the lessons. In teaching lessons, all but one of the teachers made use of the book; the most frequent use was as the source of exercises. While six of the teachers read parts of the book or had their students read during the lessons, this did not involve the reading of explanatory material. Most of the reading involved the examination of diagrams and worked examples. While four of the teachers had received formal training in text processing strategies, the use of these strategies was very limited, apparently because the texts being used provided few opportunities for this. Students indicated that the most frequent way of dealing with homework difficulties was to ask a family member and then leave it for the teacher the next day.

GAUTHIER, YVON. (1992, Spring). Teaching reading, spelling skills to French and English speaking students with learning disabilities. *Reading Improvement, 29,* 65-69.

Examines differences in strategies used to teach reading and spelling to French and English speaking LD students. Twenty French and 20 English speaking teachers were ran-

domly selected from within the same bilingual school board in the province of Ontario. All teachers taught reading and speaking skills to pupils who experienced reading difficulties associated with communicative disorders. Given a questionnaire to determine their reading and spelling program goals, the teachers were asked to rate on a 5-point scale reading and spelling methods they most frequently employed in teaching their pupils, and to identify any other method not considered in the questionnaire. ANOVA procedures applied to the data revealed significant differences between programs used by the two groups. Whereas French speaking teachers emphasized oral reading and sight vocabulary development and minimized semantic and syntactic cues in word identification, English speaking teachers emphasized silent reading and sight vocabulary development along with the development of the ability to use semantic and syntactic constraints. There were also notable differences between spelling instructional strategies used by the two groups. French speaking teachers used multisensory approaches most often, while English speaking teachers used morphemic and syntactic rules.

## II-2 Beliefs/attitudes toward reading

RICHARDSON, VIRGINIA; ANDERS, PATRICIA; TIDWELL, DEBORAH; & LLOYD, CAROL. (1991, Fall). The relationship between teachers' beliefs and practices in reading comprehension instruction. *American Educational Research Journal, 28,* 559-586.

Investigates the relation between teachers' beliefs about the teaching of reading comprehension and their classroom practices. Thirty-nine elementary teachers of grades 4-6 were administered a beliefs interview borrowed from anthropology. Teachers' beliefs were placed on continuum scales that reflected their notions of reading comprehension. Predictions about reading comprehension teaching practices (use of basal readers, consideration of pupils' background knowledge; use of oral or silent reading, and teaching of vocabulary) were drawn from the interview and subsequently related to observed practices in the teachers' classrooms. The focus of the observations was on behaviors that could differentiate between skills/word and cognitively-oriented theoretical notions of teaching. Qualitative analyses showed that these teachers' beliefs related to their classroom practices and that practices could be predicted. The majority of teaching was dominated by basal readers and focused on the skills of teaching. The lowest percentage of agreement between interview and observation occurred in the flexible/inflexible use of basals, with many more teachers indicating flexible use in their interview than was observed. A case study of a teacher whose beliefs and practices did not coincide revealed that the teacher had changes in beliefs that were preceding changes in practice.

WALKER, BARBARA J. (1991). A descriptive study of the reflective statements of preservice teachers. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 97-103). Pittsburg, KS: College Reading Association.

Explores reflective statements of preservice teachers during a reading clinic situation. Eighteen preservice teachers participated in an after-school university reading clinic where they taught students 90 minutes twice a week for six weeks. Preservice teachers completed diagnostic narratives which included four aspects: plans, rationales for plans, observations during instruction, and reflections after instruction. Reflection narratives from six teachers initially were segmented into idea units and then analyzed and categorized using analytic induction. Analysis of the reflection narratives, clinic observations, and informal interviews served as the data sources. Contrary to other research findings, these preservice

teachers were concerned more with the complexity of instructional events rather than instructional delivery. Primarily students reflected on the conditions of instruction which focused on task, text, scaffolding, technique, and situation. Students' reading behaviors such as readers' strategy use and the level of reading performance also were discussed.

ELLIOT, JOAN B., & BRITTAIN, MARY M. (1991-1992, Winter). Teachers' orientations to reading and students' responses. *Journal of Reading Education, 17,* 29-43.

Explores the reading attitudes of teachers and the relation of teachers' attitudes with those of their students. Teachers in two states—Pennsylvania (n=36) and Virginia (n=35)—responded to a 32-item questionnaire relating to reading activity. For each item, five standard response options allowed teachers to register their opinions from "strongly agree" to "strongly disagree." Children in the study (Pennsylvania=1,009; Virginia=770) responded to the Heathington Primary and Intermediate Reading Attitude Scales. In general, teachers in the Virginia sample scored substantially higher on reading attitudes, but both groups expressed positive orientations toward reading. There was no significant product-moment correlation coefficient between teachers' attitudes relating to reading activities and the attitudes of their pupils. When the Virginia students (representing grades 2 and 5 were inspected for sex and grade level differences on the attitude scale, on average girls were more favorably disposed toward reading activities than were boys.

GALLEGO, MARGARET, & HOLLINGSWORTH, SANDRA. (1992, March). Research directions. Multiple literacies: Teachers' evolving perceptions. *Language Arts, 69,* 206-213.

Describes the first phase of a collaborative effort of a professional development school to extend and transform views of literacies from an academic, school-bound definition toward "multiple literacies," or the integration of community literacy, school literacy, and personal literacy. Ten classrooms teachers, a librarian, and a bilingual teacher joined with two professors, two graduate research assistants, and two release-time teachers to design integrated social studies curricular projects from which to study changes in teaching, learning, and acquisition of multiple literacies. Group team meetings were taped and transcribed into collective stories of change. Teachers monitored students' changes through videotaping, anecdotal records, and student products. Teachers were interviewed twice over the course of the integrated curricular projects. Constant comparison, feminist methodology, and narrative inquiry were used to summarize and reflect upon the combined data. Although the teachers reported little change, the university staff observed changes in community, school, and personal literacies. Changes are reported for both individual teachers and students.

GIPE, JOAN P.; RICHARDS, JANET C.; & DUFFY, CHARLES A. (1991-1992, Winter). Measuring change in novices' beliefs and pedagogical knowledge about teaching reading in a nontraditional field placement. *Journal of Reading Education, 17,* 44-60.

Investigates changes in novices' beliefs and pedagogical knowledge about teaching reading in a nontraditional setting. Participants were 57 elementary education majors enrolled in courses for teaching reading/language arts. Each novice teacher completed a 48-item Likert-scale designed to determine their traditional or progressive beliefs about teaching roles and styles. In addition, they demonstrated knowledge of reading/language arts content by writing as much as they could about the topics on a concept map. Lectures, demonstrations, conferences, and discussions were conducted twice weekly over three semesters. Each student kept a reflective journal. At the end of the course, each student again responded to the beliefs survey and completed another concept map. Participants'

responses were scored and weighted to yield a standard score. For the 51 novices for whom complete data were available, strong progressives (n=26) remained strong (81%). In general, novices initially categorized as undecided or weak progressive showed considerable movement in a progressive direction, while the majority of students showed moderate growth. There was no significant correlation between changes in teaching beliefs and amount of knowledge. Novices who demonstrated attitudes of openness to new ideas in their journals tended to demonstrate changes in beliefs.

MILLER, JANET A. (1991). Theoretical orientation of British infant school teachers. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 147-151). Pittsburg, KS: College Reading Association.

Administers the Theoretical Orientation to Reading Profile (TORP), a Likert scale response survey, to determine British school teachers' orientation to beginning reading instruction. The sample were 146 teachers from more than 40 different schools in two countries in northeastern England. Among those who identified class levels, 26 worked at the reception level (ages 4 and 5), 22 at the middle infant level (ages 5 and 6), and 18 at the top infant level (ages 6 and 7). Results on the TORP (range 59-132) illustrate that, although England is recognized as one of the countries in which teachers use whole language approaches, only a small number of infant school teachers (16%) indicated theoretical orientations toward whole language. Instead, the majority of teachers (82%) have adopted a skills orientation with an emphasis on building sight vocabulary. Teachers also responded to five additional questions about their own teaching practices and preferences and indicated that they would rather not use reading schemes/basal readers (49%) and support the use of Big Books (97%). The majority (77%) stated that they preferred to let children use invented spellings for writing and encouraged students to guess at unknown words rather than ask for help (81%).

JOHNSON, KAREN E. (1992, March). The relationship between teachers' beliefs and practices during literacy instruction for nonnative speakers of English. *Journal of Reading Behavior, 24,* 83-108.

Examines the relation between 30 English-as-a-second-language (ESL) teachers' theoretical beliefs about second language learning and teaching, and their literacy instructional practices with nonnative speakers of English. Phase 1 consisted of collecting multiple sources of data on teachers' theoretical beliefs in order to determine the extent to which their beliefs reflected the methodological divisions of skill-based, rule-based, or function-based approaches to second language teaching. A multidimensional TESL Theoretical Orientation Profile, consisting of an Ideal Instructional Protocol, a Lesson Plan Analysis Task, and a Beliefs Inventory was created and administered to the teachers. The results suggest that the majority of these teachers possess clearly-defined theoretical beliefs which consistently reflect one particular methodological approach. During Phase 2, the researchers observed and analyzed the literacy instruction of three secondary ESL teachers with different theoretical beliefs to determine the extent to which their instructional practices were consistent with their theoretical beliefs about second language learning. Analysis of transcribed classroom observations revealed that literacy instruction for nonnative speakers of English was consistent with each teacher's theoretical orientation. Pedagogical implications for the field of second language teacher education are discussed.

LLOYD, BRUCE A. (1990, Summer). Effects of a secondary reading methods course on students' attitudes toward teaching content reading. *Reading Horizons, 30,* 288-292.

Investigates the impact of a required secondary reading methods course on preservice teachers' attitudes regarding the need to teach reading skills to high school students. Data were collected from six undergraduate class sections over one academic year. Preservice teachers completed an attitude toward teaching reading measure at the beginning and ending of the course. Both presurvey and postsurvey results suggested significant changes in opinions for most of the statements in the survey, and more awareness of the need for teaching reading skills in the secondary program.

MITCHELL, MARY MARGARET; KONOPAK, BONNIE C.; & READENCE, JOHN E. (1991). The consistency between Chapter 1 teachers' beliefs about reading and their instructional decision-making and interactions. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 377-384). Chicago, IL: National Reading Conference.

Investigates whether consistencies exist among Chapter 1 teachers' beliefs, their instructional planning, and learning interactions among students. Sample pool were 23 Chapter 1 teachers from the same school district who responded to a biographical survey and instruments that identified teachers' theoretical orientations about reading and instruction. Four primary level teachers (3 female, 1 male) with reader-based orientations were selected to participate in the study. One pullout class of six to ten pupils was randomly chosen from each teacher's schedule to be observed as they received instruction. Observations included ten separate sessions for each teacher. Field notes, audiotapes, lesson plans, and interviews served as data. Results suggest that considerable variation existed between Chapter 1 teachers' beliefs and instructional practices even though teachers held similar theoretical perspectives. Differences which existed were a result of environmental realities of the school which either created or constrained opportunities for consistency.

NELSON, OLGA; PRYOR, ELIZABETH: & CHURCH, BRENDA. (1990). Process of change in teachers' beliefs, attitudes, and concerns during a series of whole language reading and writing workshops. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 53-62). Pittsburg, KS: College Reading Association.

Describes the changes in teachers' beliefs, attitudes, and concerns related to a whole language reading program and how certain factors facilitate teacher change. Participants in this study were 31 elementary and middle school teacher volunteers, from eight school districts, with a range of teaching experience from 3 to 27 years. The teachers participated in four four-hour workshops on whole language reading and writing across a four-week period of time. Pre- and posttesting were conducted using a 25-item survey on beliefs, an open-ended question on personal concerns, and individual learning logs. Analysis revealed clear shifts in how teachers perceived their roles and their students' roles in reading and writing programs. The disparity between beliefs about word identification and comprehension at the beginning of the workshop narrowed and belief and practice became more congruent. Teacher concerns were influenced by their belief systems, their feelings and knowledge about whole language, their perceptions of their ability to be whole language teachers, and the peer support received. Management issues and lack of district support remained as concerns.

GILLESPIE, CINDY, & CLEMENTS, NANCY. (1991). Attitudes toward teaching reading in the content areas: A correlational study. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 161-166). Pittsburg, KS: College Reading Association.

Determines the consistency among content area teachers' attitude scales that are

believed to measure the same construct: secondary teachers' attitudes toward teaching of reading in the content area. Four attitudinal instruments employing a Likert-type scale were combined to form one composite 63-item measure. Investigators then administered the new scale to 52 preservice teachers who represented various content areas. After completing the composite survey, the survey items were recategorized back to original scales for scoring. Pearson correlation coefficients were calculated for all pair combinations and were significant at the .001 level. Results support the notion that each attitudinal instrument is a measure of the same construct and does not assess extraneous factors such as practices or background knowledge of teaching techniques.

## II-3 Preservice/inservice preparation

HOLLINGSWORTH, SANDRA, & TEEL, KAREN. (1991, November). Learning to teach reading in secondary math and science. *Journal of Reading, 35,* 190-194.

Investigates the impact of a secondary reading methods course on two preservice teachers' beliefs about reading instruction and on their actual classroom practices. The two teachers graduated from a math and science centered teacher education program at a California university. Data were collected from their secondary reading course (observations, instructor interviews, and examination of course materials), from observations of their student teaching sessions (including interviews and journal entries), as well as from follow-up interviews and observations in the teachers' postgraduation classrooms. Interviews were also conducted with university supervisors and cooperating teachers. During observations in both the course and the classrooms, the researchers taped lessons, produced narratives, and compiled summaries of the major concepts and activities. Findings indicated that the effects of the course were limited by constraints of actual practice, lack of connection between university course and classroom, and failure to link content and practice.

GORDON, CHRISTINE J., & HUNSBERGER, MARGARET. (1991). Preservice teachers' conceptions of content area literacy instruction. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 399-407). Chicago, IL: National Reading Conference.

Determines the effect instruction in a content area reading/writing course had on preservice teachers' knowledge, attitudes, and beliefs from beginning to end of the course. Participants were 50 students from the University of Calgary enrolled in an undergraduate compulsory secondary education course in literacy across the content areas. A variety of methods were used to collect data, including student journals, questionnaires, semistructured student interviews, observations of minilessons, field notes, and attitude scales. Some attitude change was evident from course entrance to course exit but was tempered by reservations about teaching literacy across the curriculum. There was a shift from a bottom-up model of reading to a more interactive model. In addition, students came to view writing as an opportunity to think through a concept and shifted away from initial belief that thinking preceded writing. By the end of the course, there was a shift away from teacher talk as a primary teaching method and a movement toward teaching which engages the student as active learners. The preservice teachers acquired a much greater awareness of teaching and learning strategies.

MOORE, MARGARET. (1991, Fall). Reflective teaching and learning through the use of learning logs. *Journal of Reading Education, 17,* 35-49.

Describes the use of learning journals to facilitate change in teachers' attitudes and

classroom practices. Sixteen female elementary teachers (K-8) who were enrolled in a graduate level language arts class used learning journals as they implemented an integrated model of reading and writing within their classrooms. The teacher recorded events of their day as well as their questions, reactions, thoughts, and feelings about these events. In a second section of their journals, they responded to their assigned class readings. After ten weeks, each teacher made an inventory of her journal to identify patterns of events and to react to these patterns. The Stages of Concern model was used to categorize changes in teachers' attitudes and classroom practices as they worked to install an integrated model of reading and writing within their classrooms. Results of the analyses of the journals indicated that teachers progressed from Personal and Task-Related Stages of Concern during the first two weeks to Impact-Related Stages of Concern during the last two weeks. Teachers' early concerns suggested that many did not feel comfortable with writing, the writing process, and managing a writing program. During the last two weeks teachers were focusing on their pupils' needs and on the evaluation of children's writing over time. Principals and administrators' interviews at the conclusion of the course revealed that teachers were implementing an integrated model of reading and writing.

BLAIR, TIMOTHY R., & JONES, DENEESE L. (1990). Teacher expectations: Modifying one's teaching through the self-monitoring process. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 11-15). Pittsburg, KS: College Reading Association.

Examines the relation between teacher expectations and student participation in class discussions. Ten grade 3 student teachers were observed leading a discussion of a story following silent reading. During the observation, a checking system was used to record to whom discussion questions were directed and who supplied the answers. Results indicate that across the ten observations 81% of the students participated in the lesson. Following each lesson the supervisors conferred and planned with the students to make their future discussions more inclusive. Student teacher responses during these interactions demonstrated a growing understanding of the complexity of the teaching process.

WELLS, DEBORAH. (1990). Literature study groups in a university methods class. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 31-35). Pittsburg, KS: College Reading Association.

Observes the effects of using literature study groups with a graduate-level reading methods class. Groups of five or six graduate students read and discussed poems, short stories, and novels. Students were told to read the text, reflect, write down their reaction and interpretation of the text in the form of response journals, and then meet in small groups to discuss what they had read and written. Data were derived from audiotapes and transcripts of the discussion groups, response journals kept by the students, and comments made during class discussions. The types of responses made in each group moved from constructing simple meaning to relating the story to personal experiences and using the analyses of others to think about their own understandings. In addition, the adult students critiqued how the author constructed the text, as well as how they read the text. Examples of each response type are provided and discussed in relation to how such experiences can help educators develop an understanding of a transactional view of reading.

## II-4 Roles

ELTINK, MARY ANN. (1990, Summer). Affective qualities which contribute to the

success of practicing reading specialists. *WSRA Journal, 34,* 21-27.

Attempts to identify and describe the affective qualities that give a reading specialist feelings of success and cause others to view that person as successful. Twelve reading specialists in Wisconsin were included in this study. A questionnaire listing 23 items reflecting affective qualities that might contribute to the success of a practicing reading specialist was developed. Initially, each participant was asked to consider the items on the questionnaire and to Q-sort these items into three separate stacks indicating those (1) most important, (2) somewhat important, or (3) not important in relation to his or her performance as a reading specialist. They were then asked to share their personal reflections in relation to their choices. Items that received a 50% or more response rating as most important included: personal values and standards, people who sustain and encourage, reading specialist's role, broader goals, professional readings, major chapters in professional life, job satisfaction, and code of ethics. Interviews revealed divergent, individualistic reactions. It was concluded that there is no simple answer to the specific affective qualities that practicing reading specialists connect to their job success.

ASSOCIATION OF AMERICAN PUBLISHERS. (1992, Winter). Results of 1991 AAP Reading Initiative principals' survey are encouraging. *Massachusetts Primer, 21,* 16-17.

Reports a survey of over 5,000 elementary principals from 21 states conducted by the Association of American Publishers Reading Initiative. The survey determined that more than 50% of elementary principals encourage teachers to use books in conjunction with their reading textbooks. An additional 10% of the principals said that they encouraged their teachers to use children's books instead of traditional texts to teach reading/language arts. An earlier survey had determined that 50% of responding teachers used children's books in addition to reading textbooks, while 20% relied exclusively on children's trade books. Two-thirds of the principals also indicated that they allocate a portion of their budget (up to 80%) for the purchase of trade books. More than half indicated they provide teachers with some form of inservice training on the use of children's books. Children's books were reported as most frequently used in the reading/language arts curriculum (97%), compared with their use in the social studies (15%) and science classrooms (8%). Nearly 70% of the principals indicated they encourage teachers to choose the book titles used in the classrooms. Principals listed over 175 different titles when asked to name a new children's book they would recommend to colleagues. The report cites average yearly expenditures for books between $1,557 and $3,548 per building across a total of 70,000 public and private elementary school buildings.

SUMARA, DENNIS J. (1991, Fall/Winter). Teacher as director: Spotlighting students in whole language classrooms. *Reflections on Canadian Literacy, 9,* 189-194.

Reports on observations of one whole language teacher and how the teacher demonstrated the role of director within the classroom. The fourth grade teacher observed taught in an elementary school drawing from a socioeconomically diverse population in Alberta, Canada. Examples are presented of how the teacher structured the classroom to permit the pupils themselves to become empowered. In particular the author stresses the teacher's role as an action-researcher and how that role permitted her to work more effectively in a whole language environment.

## II-5 Evaluation of programs and materials

BLANCHARD, JAY; ROTTENBERG, CLAIRE; & JONES, JOANNA. (1991, October/

December). Pedagogical knowledge and elementary reading methodology textbooks: In search of a shared paradigm. *Reading Psychology, 12,* 291-318.

Investigates whether there is evidence to support the existence of a shared paradigm of pedagogical knowledge in elementary reading methodology textbooks. A computer-based citation concordance was prepared that represented 5,760 references and 4,284 discrete entries from 12 elementary reading methodology textbooks, with copyright dates ranging from 1985 to 1989. To determine the presence of a shared paradigm among these texts, a frequency list of first authors was prepared. No single citation appeared in all 12 or even in 11 of the textbooks. However, 5 citations appeared in at least 9 (or 75%) of the texts and 19 citations appeared in at least 50% of the texts. Seventeen first authors had citations in at least 9, 10, or 11 of the 12 textbooks, including the citations of Richard Anderson, Dolores Durkin, Ken Goodman, and Frank Smith. Eighty-nine first authors had citations in 50% of the inspected textbooks. The researchers argue that the results suggest the existence of a shared paradigm of pedogogical knowledge in elementary reading methodology textbooks. The shared paradigm is not sharply defined, but rather representative of a complete amalgam of philosophies, principles, practices, and perspectives.

SMITH, WILLIAM EARL. (1991). Developing a meaningful early field experience in reading methods courses. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 111-119). Pittsburg, KS: College Reading Association.

Questions preservice teachers, cooperating teachers, and graduates regarding effective practices for meaningful field experiences in reading. Respondents to the questionnaires included 52 preservice teachers who had just completed a field experience, 14 cooperating teachers who had university students participate in their classes, and 165 education graduates. The questionnaire focused on placement logistics (number of education students in a class at a time; amount of time), experiential responsibilities (observation versus instruction), and meaningful activities. Findings revealed that the three groups have disparate views on what constituted meaningful field experiences. One to three students could be placed in a classroom at one time with the important variable being one of supervision. More than half of the experience time should be spent teaching children. No clear consensus was reached on the amount of time needed to make the experience worthwhile (range 30-120 minutes). Overall, it appears that early field experiences should provide experiences in teaching whole language activities, teaching the entire class, and teaching reading in the content areas.

OTTO, BEVERLY, & IACONO, MONICA. (1991, Fall). Implementing changes in reading instruction. *Illinois Reading Council Journal, 19,* 25-33.

Describes teachers' perceptions and experiences in implementing whole language activities in their primary classrooms. Participants were nine primary teachers (K-2) who volunteered to complete questionnaires distributed during one academic year. They were simultaneously involved in a year long staff development program in whole language instruction. Two questionnaires were developed by the researchers: one to determine the frequency of use of specific whole language activities, and the second to secure teachers' evaluations of the various activities and their perspectives on pupil and parent responses. The teachers completed one of the questionnaires every six weeks resulting in a total of three administrations of each instrument. Frequencies of use were determined; evaluative comments were summarized. Results indicated that teachers were selective in their use of the various activities and displayed individual variations in their patterns of change. Overall, the holistic activities were used with increasing frequency by all teachers; however, change was gradual and occurred throughout the year. Assessment of progress was frequently mentioned

as a source of difficulty. Feedback from parents ranged from no comments to positive support resulting from their observations of children's positive attitudes toward reading. As the year progressed, teachers shared fewer concerns and problems and described increased enthusiasm for the holistic instruction they had adopted.

HOSKING, NEVILLE J. (1991, Summer). A comparative study to determine appropriate implementation strategies for Saskatchewan's new elementary English language arts curriculum. *Reflections on Canadian Literacy, 9,* 82-89.

Details comparative responses from two groups of primary teachers charged with implementing a new English language arts curriculum in Saskatchewan. Subjects included 36 teachers (grades 1 & 2) field testing the new language arts curriculum and 100 teachers selected randomly from all remaining grades 1 and 2 teachers. Subjects completed one researcher-designed questionnaire and participated in follow-up interviews. Resulting data indicated the groups' current classroom organization and instructional practices and the types of support teachers felt they needed to successfully implement the new curriculum. Survey data were analyzed and reported as descriptive data. Selected items were tested to determine whether reported mean variations between groups were statistically significant at the .05 level. Results confirmed that the demographic, attitudinal, and classroom practice profiles of the two groups were similar. Subjects expressed preferences for language arts activities that enhanced the integrated instruction of reading and writing, using a wide variety of children's literature, big books, and multilevel reading materials. Both groups agreed that teacher inservice was a high priority. The preferred inservice format was one that presented sessions during school hours and extended throughout the school year.

CLOER, TOM, JR., & MCNEELY, THOMAS. (1991). Examining transmitters of literacy: Factors related to performance on the NTE test of professional knowledge. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 97-110). Athens, GA: American Reading Forum.

Establishes concurrent validity of the NTE Test of Professional Knowledge (TPK) with performance on 20 independent variables. Subjects were 202 undergraduate students in the teacher education program who had taken the TPK. The independent variables compared included component scores of the SAT, high school class rank, predicted GPA, subtest scores from the admission to teacher Education Entrance Exam (EEE), observation during student teaching (Assessment of Performance in Teaching-APT), grades from several education courses, and scores on the specialty tests of the NTE. High coefficients of correlation with the TPK were found for the NTE specialty area exams, SAT-Verbal, overall GPA, and the reading portion of the EEE. Those education courses which yielded high coefficients with the TPK were Human Development, Psychology, and Teaching Handicapped in the Regular classroom. Low coefficients with the TPK were found for the APT courses related to educational foundations, education methods, exceptional children, and student teaching. The authors conclude that the TPK measures the ability to take verbal tests more than anything else.

ROEHLER, LAURA R.; RUSHCAMP, SHARON; & LAMBERTS, FLORENCE. (1991). Thriving and growing with change. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 357-366). Chicago, IL: National Reading Conference.

Describes an elementary school's development as a Professional Development School (PDS) in relation to impact on pupil learning and principles that successfully guided the implementation process. The PDS faculty and pupils were 18 teachers, 3 instructional aides, 6 university faculty, 1 principal, and 300 children. Restructuring efforts centered on providing opportunities for teachers to assume new roles (leadership), create opportunities

for whole group dialogues (professional growth time), provide new ways to develop and teach integrated science units (team teaching), and provide new classroom roles for teachers (classrooms). Four data sources were used: (1) Michigan Education Achievement Program (MEAP) test for science, (2) videotapes of classroom interactions, (3) audiotapes of planning meetings, and (4) faculty interviews. ANOVA using the MEAP scores showed that fifth grade pupils who had attended the school during the project had science knowledge that was significantly greater than pupils who had not. Pupil interviews showed that the children consistently used dialogue strategies during their discussions. Principles found to influence the success of the program include: nurturing the members of the steering group who assume decisionmaking and leadership roles; nature, direction, and pace of change should evolve from the community participants; existing strengths within the community should serve as the foundation for future change; a balance of support and challenge should be established; and the curriculum and instructional complexities should be acknowledged and embraced.

SCHARER, PATRICIA L. (1991). Moving into literature-based reading instruction: Changes and challenges for teachers. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 409-421). Chicago, IL: National Reading Conference.

Explores changes in classrooms and teachers resulting from increasing the use of literature for reading instruction. Five female teachers (grades 1, 3, 5, 6, and LD) from one elementary school volunteered to be participants in the study. The elementary school adopted a five-year plan to implement literature-based reading instruction in every classroom. Teacher interviews (five per teacher), observations (six per teacher), and forum discussions (ten meetings) were used to gather data during the beginning, middle, and end of the nine-month project. Teachers in the study increased the use of literature in their classrooms by replacing basal stories, skipping workbook pages, and providing more opportunities for pupil self-selection of reading materials. All teachers reported increases in their read-aloud program. Expectations for independent work shifted from workbook assignments to book-related activities. Teachers decreased the use of basal assessment tools and increased the use of informal measures such as running records, book logs, observations, reading conferences, and literature projects. Difficulties for teachers in the areas of materials, program organization, and evaluation identify the need for specifically designed inservice programs.

LYONS, CAROL A. (1991). A comparative study of the teaching effectiveness of teachers participating in a year-long or 2-week inservice program. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 367-375). Chicago, IL: National Reading Conference.

Seeks out whether a two-week inservice program, Reading Success (RS), is similar to the yearlong inservice program, Reading Recovery (RR) in terms of model conformity, quality of lessons, questioning patterns, and instructional ecology. The most successful teacher from each group, RS (n=7) and RR (n=7), individually tutored a different group of 28 students for 70 days. Lessons of each teacher working with one randomly selected student were videotaped at the beginning and end of instruction and rated by groups of trained teachers. The nature of instructional ecology was examined through structural maps and transcripts of conversations after four weeks of instruction. Mixed model ANOVA and MANOVA were used to examine differences between the two teachers across time, using generic quality and questioning focus measures. Although RR and RS programs are based on similar principles, use the same materials, and learn the same techniques, data indicate that RR students outperformed RS students. Significant group differences were found between the two teachers in

model conformity, generic quality of lessons, and questioning patterns in favor of the RR teacher.

ERICKSON, LAWRENCE. (1991). How RIPE promotes change in literacy learning in rural schools. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 87-95). Athens, GA: American Reading Forum.

Attempts to validate how the Renewal Institute for Practicing Educators (RIPE) has impacted changes in literacy learning in rural elementary schools. RIPE is a state funded school district/university program that provides tuition free spring and summer classes in science, math, and language arts for rural elementary teachers. Sampled were 50 elementary teachers who had completed three renewal courses. Data examined included journals kept by 35 teachers, survey responses from 27 teachers, interviews with 20 teachers, and school visits and observations of 23 classrooms. Results indicated that 95% of the teachers were attempting change. During implementation, teachers evolved through stages of speculation, reflection, and problem-solving conflicts in belief systems. Observations confirmed that more expressive writing was occurring in the classrooms, as well as the use of more SSR, children's literature, inventive spelling, and cooperative learning. Incentives found to affect implementation included a course format that modeled a "leading from behind" process, including open discussion and sharing.

WILSON, ROBERT M., & BOWEN, CYNTHIA T. (1990). The use of signing to reinforce sight vocabulary: Teachers' perspectives. In Suzanne F. Clewell (Ed.), *Literacy: Issues and practices* (pp. 77-80). Bethesda, MD: Maryland state International Reading Association Council.

Evaluates the effects of the use of signing as a reading intervention strategy by seeking feedback from educators. Ten classroom teachers and five reading specialists completed and returned a questionnaire designed to identify how the educators used signing with their students. Of the 15 teachers, 14 reported that they used signing, with 9 reporting they used it weekly. Teachers were in agreement that signing had a "very good" or "good" effect on sight vocabulary and on student attitude for above average, average, and below average readers. Eight of the teachers reported using signing in subjects other than reading, as well as in creative projects. All 14 indicated their use of resources for signing, while 11 teachers noted they could use more help with signing proficiency. Thirteen teachers reported they would recommend this strategy to others.

TELFER, RICHARD J.; JENNINGS, ROBERT; & MOTTLEY, REED. (1991). Activities and adaptations for at-risk students: Student and teacher perceptions. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 153-172). Athens, GA: American Reading Forum.

Asks students and teachers to rate a list of activities and adaptations to school programs (n=40) in terms of effectiveness in helping at-risk students and whether these recommendations are actually used in classrooms. The sample surveyed included 60 teachers, 89 not at-risk students, and 97 at-risk students across four states. T-tests and ANOVAS were conducted to test differences between the pairs of scores (effect versus use) for each item and the three groups' responses. While the three groups were positive in their views of effectiveness for suggested activities and adaptations for at-risk students, they did not perceive that many of these items were currently in place in schools. The three groups reacted differently to items listed, with the most prominent difference noted in the frequency of teachers' positive responses to job-related suggestions. The biggest difference found between not at-risk and at-risk student responses was related to the need for support groups and/or counseling.

with the former believing this would be helpful and the latter perceiving this suggestion would not.

## II-6 Reading interests and preferences

WOMACK, SID T., & CHANDLER, B.J. (1992, February). Encouraging reading for professional development. *Journal of Reading, 35,* 390-394.

Surveys public school teachers to determine their reading habits and to identify factors that enhance or discourage professional reading. Compares such factors among elementary, middle school, and high school teachers. The sample included 22 elementary, 23 middle school, and 19 high school teachers in one school district. The survey questionnaire consisted of 40 items addressing four areas: reading habits, enhancers of professional reading, detractors from professional reading inherent in the reading material, and detractors external to the reading material. Mean scores were tabulated and items were combined to form four subscales corresponding to the four areas of study. Results revealed that the teachers considered themselves frequent readers of professional material. In reading habits, there were no significant differences among elementary, middle school, and high school teachers. Teachers at all levels preferred materials covering specific areas of specialty, rather than materials on education in general. The highest ranked enhancer of professional reading was the use, or discussion, of professional writings by administrators. Detractors of reading were heavy teaching loads that limit time for reading and the need for family time. Elementary teachers reported significantly fewer enhancements for professional reading; no significant differences were observed between high school and middle school groups. There was no perceived difference in the ability of elementary and high school teachers to analyze research reports; however, middle school teachers reported less trouble than either of the other two groups. The middle school teachers also scored the highest in their reported ability to accomplish professional reading in spite of outside impediments.

WILLIAMSON, JOHN. (1991, July). Teachers as readers. *Reading, 25,* 30-38.

Explores the attitudes and reading habits of teachers. Subjects included one group of university lecturers (n=23) and four groups of inservice (n=67) and preservice teachers (n=88) enrolled in programs of study at one university. A researcher-designed questionnaire was distributed to all subjects to ascertain amounts of independent reading, lists of specific authors read, number of books owned, newspaper reading habits, and television viewing habits. Results revealed that 61% of the teachers and students considered themselves above average in regard to their amounts of reading. In response to their recent reading activities, most reported reading for pleasure or reading professionally relevant materials. Those who read the least amount of fiction were students in the M. Ed. program who reported high amounts of academic reading. Apart from that group, 90% reported reading for pleasure in the previous month. Teachers reported buying many books, and more than half in each group of teachers and students reported some use of libraries. Their lists of authors revealed a wide range of choices, most of these writers of serious fiction. Four-fifths of the respondents reported being regular newspaper readers. Television viewing, which did form a part of the leisure interests of this sample, was reported to not take up an inordinate proportion of their time.

BRITTAIN, MARY M., & ELLIOTT, JOAN B. (1990). Reading habits and attitudes of preservice and inservice teachers. *Reading in Virginia, 15,* 54-57.

Compares the reading habits and attitudes of preservice and inservice teachers responding to a researcher-designed questionnaire. Subjects were 218 preservice teachers

from Pennsylvania (n=122) and Virginia (n=96) and 218 inservice teachers from Pennsylvania (n=125) and Virginia (n=96). The questionnaire was a Likert-type scale with 15 items related to reading habits, 17 related to reading attitudes, and 5 dealing with interactions with children. A 2 x 2 ANOVA was used to analyze the data. Results revealed no significant differences between groups due to location. All comparisons between inservice and preservice groups favored the inservice group, suggesting that enthusiasm for reading is enhanced by teaching experience.

LABONTY, JAN. (1991, October). College students as readers. *Reading Horizons, 32,* 21-32.

Asks 65 undergraduate and 62 graduate students to set their own reading goals in two areas: personal reading and professional reading. Each was asked to select at least one book and either a magazine or newspaper for personal reading and three issues of either a professional or teacher journal and children's literature for professional reading. The exact number of each was a personal choice. Reading goals varied among the subjects. *Instructor* was the preferred teacher magazine of both groups of subjects. Personal reactions to the projects were favorable.

HOLDER, BONNIE H. (1991, Spring/Summer). Favorite children's books: Preservice teachers' choices. *Mississippi Reading Journal, 4,* 12-15.

Presents an annotated list of children's books selected by 67 preservice teachers as favorites from among those read in children's literature classes. Participants prepared individual lists of favorites which were shared in small groups. Group lists were established through voting, and a final list representative of the entire class was identified. The resulting list included 20 titles presented in order of preference.

MCNINCH, GEORGE H.W., & GRUBER, ELLEN J. (1992, Winter). A survey of the reading status and literacy memories of primary teachers. *Journal of Research and Development in Education, 25,* 76-81.

Surveys 187 Georgia primary teachers to determine the teachers' perceptions of their reading habits and memories of their early literacy environments. Two separate surveys were administered. The 21-item Reading Status Survey quantifies amount or type of reading as well as involvement with varying text sources. The Recalled Reading Behaviors questionnaire is a 20-item survey that samples reading memories in four areas—Home Reading Habits, Emerging Literacy, Reading Models, and Reading As a Tool. Results of chi-square analysis indicated that the teachers perceived themselves to be readers, and attributed specific behaviors to their reading status profiles. A one-factor ANOVA indicated that teachers who described themselves as frequent readers reported significantly different reading status profiles than teachers who described themselves either as average or occasional readers. The intensity of early literacy memories was found to differ significantly among the three status groups. Primary teachers who labeled themselves frequent readers recalled more literacy events from their formative preschool and early school years than did teachers who labeled themselves either as average or occasional readers. Bonds between early literacy environments and current reading habits were suggested.

ABRAHAMSON, RICHARD F.; CARTER, BETTY; & MCLAURIN, MOLLY. (1991). What do Texas reading teachers read? The results of a statewide survey. *Reading Education in Texas, 7,* 23-28.

Reports a survey of an unspecified number of Texas teachers to determine what they read for pleasure and information. In addition, the teachers were asked to supply titles they recommend to others, those they read aloud to students, and those that have influenced their

lives. Questionnaires were mailed to a geographic cross-section of the membership of the Texas State Reading Association. The majority of responses were received from metropolitan areas and from elementary teachers. Teachers indicated that *Readers' Digest* and *People* were the most frequently read magazines. The two most frequently cited authors were Danielle Steel and Agatha Christie. *The Reading Teacher* was the most read journal. The title teachers most often recommended to new teachers was *The Read-Aloud Handbook*, followed by *In the Middle*, and *Children's Literature in the Reading Program. The Read-Aloud Handbook* and *The Early Detection of Reading Difficulties* were most frequently mentioned as books which had the greatest effect on teachers' professional lives. The six titles that were most frequently listed for reading aloud were: *The Polar Express, James and the Giant Peach, Strega Nona, The Giving Tree*, and *Where the Red Fern Grows*. Teachers' own favorite children's books were *Alexander and the Terrible, Horrible, No Good, Very Bad Day, Love You Forever*, and *Charlotte's Web*.

## *III. Sociology of reading*

### III-1 Role and use of mass media

COOK, PHILIP S.; GOMERY, DOUGLAS; & LICHTY, LAWRENCE W. (EDS.) (1992). *The future of news: Television, newspapers, wire services, newsmagazines*. Baltimore, MD: Johns Hopkins University Press.

Devotes a section in the book to each of the four news media: television, newspapers, wire services, and newsmagazines. Within each section, separate chapters are devoted to aspects of the state of the art of the specific medium, changes in the role of each, and future directions. Relative to newspapers, it is noted that the number of competing dailies has continued to drop. While weekday circulation has increased between 1970-1988, it has not kept pace with the increase in households or with the increase in the number of adults. Even Sunday newspapers which demonstrated a strong growth in circulation figures did not match the overall increase in population and households. Two marked trends in newspapers occurred in the 1980s: greater emphasis on features relative to news, and increased attention to local rather than national and world news. Users read the daily and Sunday editions in different ways. Half the readers tend to go through the daily page by page, but skip around in the Sunday paper. Younger readers read only what interests them in the Sunday paper. A 1987 survey revealed that about one-fifth of adult subscribers report that on a typical day they do not get around to reading the paper. In the same survey, 45% of interviewees reported that they received some news from the radio, 13% subscribed to one or more newsmagazines, and 30% read a weekly paper. The survey also revealed that daily newspapers were read selectively, with 84% of those interviewed reporting that they usually read the local community news. Percentages reported for other areas included 75% for international news, 60% for TV listings, 59% for advice columns, and 58% for comics. The three major newsweekly magazines (*Time, Newsweek, U.S. News and World Report*) have all undergone graphic redesigns since 1985; however, circulation has remained steady at about 10 million readers for almost a decade. All have larger pictures, shorter stories, and more white space. The average length of an article is now fewer than 750 words where once it was thousands of words. A sampling of covers of the three magazines for the ten year period from 1979 to 1988 revealed that all have tripled the number of covers devoted to topics of service to the readers. It is felt that the newsmagazines have tended to show evidence of appealing to specific, advertiser-desired demographic groups. There is some disagreement as to whether the

three large newsweeklies will survive. Network news shows attract no more than 5% of households as often as four nights a week. Such programs have been losing viewer share to entertainment shows on cable and on independent stations. The book closes on the note that the future of news is in a disquieting new age.

BECKER,, LEE B.; KOSICKI, GERALD M.; & JONES, FELECIA. (1992, Spring). Racial differences in evaluations of the mass media. *Journalism Quarterly, 69,* 124-134.

Investigates racial differences in interactions with the media. Secondary analysis was made of two national data sets with 601 African-American and 2,104 adult subjects. Findings are reported for each study and for both combined. African-Americans in general know less about how the mass media operate, see fewer outside influences on the media, and are less cynical about the media than are the white subjects. The black subjects did not make distinctions between media biases and biases in other aspects of society. Those who have the most contact with the dominant white society evaluated the media as more biased than those with less contact. Both groups judged the media to be influenced by big business, advertisers, unions, and the two political parties. They evaluated the media about the same in terms of believability, overall favorability, and fairness.

BURNETT, JOHN J. (1991, October/November). Examining the media habits of the affluent elderly. *Journal of Advertising Research, 31,* 33-41.

Examines the use of mass media by two elderly groups: the affluent (income of $30,000+) and moderate ($15,000 to $24,999). The two groups were further divided by gender. Items on the survey instrument relevant to this study were seven lifestyle items based on a 1-6 Likert-type scale. Affluent males are significantly more likely to read the news, business, travel, and magazine sections of their newspapers, plus *USA Today,* and the *Wall Street Journal.* Affluent females read the news, food, lifestyle, and travel sections of their newspaper plus *USA Today.* The moderate female reads advertising supplements. News magazines appeal to the more successful, better-educated male. The moderate male preferred *Field and Stream;* moderate females, *Family Circle.* Differences in television programs were minimal. Radio preferences are included. The affluent elderly have different attitudes toward the media than the moderate elderly. Both affluent men and women thought media advertising insulted their intelligence. Other differences concerning media attitudes are noted.

ENTMAN, ROBERT M. (1991, Autumn). Framing U.S. coverage of international news: Contrasts in narratives of the KAL and Iran Air incidents. *Journal of Communication, 41,* 6-27.

Surveys two issues of *Time* and *Newsweek* along with the CBS Evening News broadcast following KAL and Iran Air incidents for differences in reporting and in news frames. The focus of the investigation was on the descriptions in the news writing, such as key words, concepts, symbols, and visual images. In both illustrations and texts the KAL reports attributed guilt to the Soviet leaders, used the hammer and sickle logo, used 239 square inches of graphics showing the exploding aircraft, and named victims and grieving relatives. Reports of the Iranian incident were missing these elements. The KAL descriptors promoted moral judgments at the incident and the perpetrators by categorizing them as criminally evil; Iran Air coverage used abstract vocabulary, describing the event as an accident.

O'CALLAGHAN, JEROME, & DUKES, JAMES O. (1992, Spring). Media coverage of the Supreme Court's caseload. *Journalism Quarterly, 69,* 195-203.

Compares the issues decided by the Supreme Court with the number of news stories devoted to these issues. The 153 cases decided by the Court were categorized into five head-

ings. A content analysis of the case coverage was made of three major newspapers, three newsmagazines, and three television networks. The best coverage fit to actual types of cases decided was in the *New York Times*. All sampled news media gave more coverage to civil rights cases than the number of these cases would justify. First Amendment issues received close news media attention; economic and other issues did not. The data showed that the issue least often on the Court docket was the most reported one.

## III-2 Content analysis of printed materials

DILLON, DEBORAH R.; O'BRIEN, DAVID G.; HOPKINS, CAROL J.; BAUMANN, JAMES F.; HUMPHREY, JACK W.; PICKLE, J. MICHAEL; RIDGEWAY, VICTORIA R.; WYATT, MONICA; WILKINSON, CYNTHIA; MURRAY, BRUCE; & PAULER, SHIRLEY M. (1992, January). Article content and authorship trends in *The Reading Teacher* 1948-1991. *Reading Teacher, 45,* 362-368.

Analyzes 2,700 articles published in all issues of *The Reading Teacher* since its inception as the ICIRI Bulletin in 1948. Content was classified under 51 topics; authorship was also noted. The number of articles increased over time as did the coauthored articles. The top four topics (quantitative research, instructional strategies, assessment, children's literature) accounted for 32% of all articles. Topics such as word identification, reading problems, and attitudes/habits/interests demonstrate steadily increasing interest over the years; but topics such as grouping or content reading peaked in early volumes and declined. Listed are 26 most frequently published writers who were single authors or first author of seven or more articles, editorials, features, or news items.

BAKER, CAROLYN D., & FREEBODY, PETER. (1989). *Children's first school books: Introductions to the culture of literacy.* Oxford, UK: Basil Blackwell.

Analyzes reading materials children use in their first years of school in terms of their content as well as some of the ways in which the texts are presented and discussed in classrooms. Included in the analysis were 163 basal and supplementary readers used with 65 classes of first and second year children in New South Wales, Australia. The authors take the position that literacy acquisition involves various levels of relation between oral and written language and present their theoretical bases in Chapter 1. Subsequent chapters deal with different and distinctive issues. Chapter 2 presents details of the vocabulary content of children's first school books, including initial analyses of word frequencies and comparisons of the vocabulary used in the texts with the oral language of children. Declarative statements constitute 85% of the sentences encountered in the reading materials. The median length of all sentences is five words. The words tend to be short and are not always easily decodable. The language of the beginning reading materials appears to share some features of oral language samples found in five-year old children. Chapter 3 addresses the social world presented in beginning reading books. The child characters are consistently shown in contexts of child-adult relations, even though the adults may not be present. The materials caricature the adult world as well as the child's world; however, both caricatures are drawn in outlines compatible with school-literate culture. The author's role in children's school books is discussed in Chapter 4. Chapter 5 studies how characters in the books talk with one another; i.e., the kind of utterances that characters produce and how they are shown to speak to one another. This language is contrasted with how children converse with their peers and with adults in everyday life. The portrayal of children and childhood in the texts is the central theme of Chapter 6. Chapter 7 discusses the nature of teacher questioning in the process of

teaching children to read. Chapter 8 presents conclusions and implications from the authors' study.

WOLF, ALVIN. (1992, May/June). Minorities in U.S. history textbooks, 1934-1985. *The Clearing House, 65,* 291-297.

Reviews studies of content analysis of U.S. history textbooks, 1945-1985. The period was divided into the 1950s, 1960s, and 1970 through 1985. Omissions of different ethnic groups are noted for each period. The history books in the later period tend to include more minorities and tell more about them, but some researchers find that there are still significant shortcomings in the books and that few are adequate in their treatment of minorities. Some researchers assert that trying to show minorities in a positive light sometimes distorts reality. Textbooks still tend to dwell on outstanding minority personalities and ignore daily lives of the masses. The greatest improvements have been in the presentation of Blacks and Native Americans. Hispanics and Asians have tended to be neglected.

PIZZINI, EDWARD L.; SHEPARDSON, DANIEL P.; & ABELL, SANDRA K. (1992, February). The questioning level of select middle school science textbooks. *School Science and Mathematics, 92,* 75-79.

Analyzes eight commonly used middle school science textbooks to determine the cognitive level of questions and locations of questions within chapters. Questions were classified as input (recalling information), processing (drawing relationships among data recalled), and output (use of data in new ways such as generalizing). Textbooks were evenly divided into four sequential clusters by chapter, from which one chapter in each cluster was randomly sampled. All questions were analyzed in each chapter. Sentences for each chapter were counted and used to derive a proportion of question levels per chapter. Chapters were further divided into six sections to account for variations in question locations. ANOVA and percentages were used to analyze data. Input questions accounted for 78.8% of the total textbook questions with 14.5% being processing, and 6.7% output. No statistical differences were found in the proportion of each level of questions among the textbooks analyzed.

CHIAPETTA, EUGENE L.; FILLMAN, DAVID A.; & SETHNA, GODREJ H. (1991, October). A method to quantify major themes of scientific literacy in science textbooks. *Journal of Research in Science Teaching, 28,* 713-725.

Develops a method to analyze quantitatively the content of five middle grade and high school science textbooks. Textbooks used were in the areas of life science, earth science, physical science, biology, and chemistry. Content was categorized under the following topics: knowledge of science, investigative nature of science, science as a way of thinking, and interaction of science, technology, and society. Details of the methods of analyzing and problems entailed are explained. The percentage of agreement among two researchers and a science teacher was between 80% and 97%, while the kappas, a second measure of interrater agreement, ranged from 0.73 to 0.96, all above the levels set as acceptable at the beginning of the inquiry.

SELDEN, STEVEN. (1991, September). Selective traditions and the science curriculum: Eugenics and the biology textbook, 1914-1949. *Science Education, 75,* 493-512.

Analyzes 40 high school biology textbooks, published between 1914 and 1949 for their treatment of eugenics. The specific purpose was to determine if: (1) eugenics was presented as a legitimate science, (2) the evidence was offered in support of eugenics, and (3) eugenical social policies were recommended. Over 90% of the volumes included the topic. Evidence presented as support for eugenics often took a Mendelian single trait interpretation

of inheritance and argued that human qualities ran in particular families. Over two-thirds of the texts included lists of outstanding hereditary family ties. In-depth case studies of 10 selected texts were given. It was concluded that the 40 texts presented reflected more social attitudes and political theories than scientific data.

REAGAN, TIMOTHY G. (1991, Fall). The past in the service of the present: A comparative study of South Africa and Zimbabwean social studies textbooks. *Journal of Research and Development in Education, 25,* 58-63.

Compares the ways in which cultural and ethnic diversities are presented in social studies textbooks used in the Republic of South Africa and Zimbabwe. All textbooks for Standards 6 through 9 (grades 8-11) were examined. These textbooks function to reinforce very different political outlooks and to convey radically different views of race, ethnicity, and culture in both ideological and effective terms. South African textbooks emphasized historical violence among black groups there, used "special pleading" in describing African leaders and developments, and described paternalistic assistance given to Africans by white groups. Zimbabwean textbooks are clearly African and Third World in appearance, content, and ideology, while those in South Africa are similar to those in Europe and North America. The Zimbabwean books emphasize such issues as precolonial Africa, colonialism, imperialism, and their effects on African societies. Their common theme is the need to liberate history in Africa and throughout the world.

BENSON, MALCOLM J. (1991). University ESL reading: A content analysis. *English for Specific Purposes, 10,* 75-88.

Analyzes four texts an ESL student at a U.S. university encountered. These texts were analyzed for their content, their use of sources, and the values they represented. Text type and difficulty analysis also were performed. A piece of the student's writing was examined to determine what learnings from the readings had taken place. Readings were found to be more varied in content and text type than had been thought, together with extensive use of sources of authority. A strong Western-intellectual-progressive value system was shown. The learning achieved by the student was described as expansion of already known ideas. Based on the results of this analysis, it was concluded that extensive reading is important for ESL students.

SNELSON, PAMELA, & TALAR, S. ANITA. (1991, September). Content analysis of ACRL conference papers. *College and Research Libraries, 52,* 466-472.

Analyzes content of 181 papers presented at the second, third, and fourth national conference of the Association of College and Research Libraries and compares the findings with those from a study of the first national conference. Using the categories from the earlier study, the researchers determined if reports were research and if the research adhered to accepted practices concerning problem statements, literature review, hypotheses, research methodology, findings, conclusions. The findings showed that the research content in the papers declined and that the few considered to be research met the norms of scientific study. In the first study, research goals were spread among various categories; the last three, evaluative or exploratory predominated.

BRAMLETT-SOLOMON, SHARON. (1991, Autumn). Civil rights vanguard in the deep south: Newspaper portrayal of Fannie Lou Hamer, 1964-1977. *Journalism Quarterly, 68,* 515-520.

Uses five leading newspapers for an analysis of the coverage of Fannie Lou Hamer, an influential and respected black activist in the freedom struggle in the South. A coding instrument was devised for quantification of data pertaining to frequency of stories, origin,

completeness, and presence of sexist bias. An examination of the five newspapers yielded 23 news stories and 8 editorials on Hamer. Much of the coverage appeared in 1977, the last year of her life. Almost three-fourths of the reports were staff written. The newspapers published more event-oriented articles than background stories. Gender stereotyping appeared in every newspaper but was not found in marital status references.

HANSEN, KATHLEEN A. (1991, Autumn). Source diversity and newspaper enterprise journalism. *Journalism Quarterly, 68,* 474-482.

Analyzes 60 enterprise newspapers for sources used and compares the results with those in another study using daily news source affiliations. Thirty of the enterprise papers were nominees for Pulitzer prizes from 1985 to 1989. They were compared with non-Pulitzer stories. Enterprise news stories relied less on government sources than did daily, front-page newspaper coverage. The enterprise projects focused more often on public health/environment topics, followed by government/public affairs. They relied most heavily on national-local sources rather than state or local sources. They depended on U.S. citizens and sources more than daily news content did. The Pulitzer stories displayed a smaller proportion of total information sources affiliated with government than did the non-Pulitzer stories.

LACY, STEPHEN; FICO, FREDERICK; & SIMON, TODD F. (1991, Autumn). Fairness and balance in the prestige press. *Journalism Quarterly, 68,* 363-370.

Evaluates and compares fairness and balance in 9 prestige newspapers and in 12 large circulation daily newspapers during newspapers during the week of April 21-26, 1986. All staff-written stories involving controversy and relating to local government, local public school education, or local business were analyzed. Fairness was determined by the reporter's efforts to interview a spokesperson on both sides of the controversy. Balance was determined by comparing the number of words given to the two sides of the controversy. A total of 343 stories were analyzed. Both hypotheses were supported: prestige newspapers presented both sides of a local controversy more often and presented more balanced accounts than did large circulation newspapers.

MAYO, CHARLES, & PASADEOS, YORGO. (1991, Autumn). Changes in the international focus of U.S. business magazines 1964-1988. *Journalism Quarterly, 68,* 509-514.

Analyzes content in three business magazines for their international coverage. Random issues of each magazine were analyzed for 1964-1968, 1974-1978, and 1984-1988. International articles were coded according to magazine, decade, region, U.S. angle, and size of article. The three magazines devoted approximately 15% of the news hole to international coverage. The number of international articles increased from 379 in the 1960s to 444 in the 1970s and to 586 in the 1980s. However, the length of the average article was larger in the 1960s (2.3 pages) than in the 1970s (1.5 pages) and 1980s (1.6 pages). The increase in the global coverage in the three magazines was statistically significant. Western Europe had significantly more coverage than its share of U.S. trade during all three decades, but Canada and Mexico had significantly less coverage than their share. Overall, 49% of international coverage had a U.S. angle in the 1960s; 64% in the 1970s; and 58% in the 1980s.

CHIASSON, LLOYD E. (1991, Spring). The Japanese-American encampment: An editorial analysis of 27 West Coast newspapers. *Newspaper Research Journal, 12,* 92-107.

Examines the editorial stances of 27 daily newspapers on the west coast on the internment of Japanese-Americans in the United States during World War II. Editorial positions were counted in each newspaper for two periods: December 8, 1941 to April 30, 1942 and December 14, 1944 to February 1, 1945, the latter being the time immediately after the closure of the camps. Of the 310 editorials pertaining to the Japanese-Americans, 93 were concerned with mass evacuation, 73% appearing in the first period. No significant differences were found among the newspapers in regard to the number of editorials printed about mass evacuation. They were significantly more supportive of the evacuation during the first period than the second. More than 88% of the editorials in the early period supported the internment of the Japanese-Americans; this support dropped in the second period. The one issue common to both periods in 26 of the 27 newspapers was the question of the military necessity of internment.

VAYREDA, AGNES, & ANTAKI, CHARLES. (1991). Explanation in abortion discourses. *Text, 11,* 481-498.

Analyzes two Spanish publications, one by a proabortion group (Commisió) and another by an antiabortion group (Pro-Vida), for linguistically marked explanations. Pro-Vida materials analyzed were published in Catalan in Barcelona from 1979 to 1987 (13 issues, 45 pages). Proabortion material was published in Castilian (Spanish) in Madrid from 1984 to 1988 (9 issues, 47 pages). The two groups made different uses of different explanatory genres (causal attribution, reason-giving, backing claims, and backing speech acts). The Pro-Vida materials used more cause-giving, backings of definitional claims and speech-acts than the Commisió ones, but the latter group made more use of reason-giving. It was concluded that the antiabortion group constructed abortion as a philosophical and moral issue of conscience while the Commisió viewed abortion as a political decision that should rest with women.

BOSHIER, ROGER. (1992, Spring). Popular discourse concerning AIDS: Its implications for adult education. *Adult Education Quarterly, 42,* 125-135.

Finds that several themes about AIDS have permeated the popular media. Magazine stories and newspaper clippings over a 10-year period were analyzed. Themes that were identified were not displaced by new ones but were enhanced by them. Identified themes were presented and discussed in chronological order: gay plague, contaminated other, innocent victim, heterosexual-risk, and development discourse of AIDS. Suggestions are included for use of this information about AIDS in adult education classes.

SERVAES, JAN. (1991, Autumn). European press coverage of the Grenada crisis. *Journal of Communication, 41,* 28-41.

Analyzes six major European newspapers' (Britain, France, Germany, the Netherlands, Spain, Switzerland) coverage of the 1983 U.S. invasion of Grenada. Newspapers published between October 13 and November 20 were surveyed for the amount of coverage, subjects and themes emphasized, sources, and news published during a four-day press ban. In the six newspapers 535 articles were found, most of them in the English paper. Primary sources (newspapers' own staffs) provided 54% of the articles. Almost 53% of all articles gave either a positive or negative opinion within the accounts of events; 14% were coded as opinion. The U.S. position was the leading theme in 121 stories. Events were considered an East-West conflict and the press stories were more concerned with the Communist threat than with events on Grenada itself. Over half of the stories emanated from Europe and the United States with only 10% originating in Grenada.

MORIARTY, SANDRA E., & POPOVICH, MARK N. (1991, Autumn). Newspaper visuals and the 1988 presidential election. *Journalism Quarterly, 68,* 371-380.

Examines photographs and illustrations of the 1988 presidential and vice-presidential candidates printed in three weekly newsmagazines between September 5 and November 21. Each photo was coded to identify 16 visual attributes. Of these, 11 were rated more favorable, less favorable, or neutral based on guidelines established from the literature. Attributes were tested by 2-tailed T-Tests; ANOVA was used to determine if the candidates, newsmagazines, or the time period interacted with the size of the pictures. The difference in visuals between the two parties was significant, favoring the Republicans. No 3-way interactions (candidate x time period) were found (ANOVA). The magazines underplayed both vice-presidential candidates. The evidence showed that the editors attempted to balance the coverage between both parties as the Republican edge was not large.

PICARD, ROBERT G. (1991, Autumn). How violence is justified: Sinn Fein's *An Phoblacht. Journal of Communication, 41,* 90-103.

Studies the contents of *An Phoblacht,* a weekly newspaper representing the political wing of the Irish Republican Army. Fourteen of the paper's 50 issues in 1987 were randomly selected and analyzed. Each article was measured and placed into 1 of 21 categories. Page numbers were recorded for each article related to violence and provocations by the IRA, security forces, and loyalists as well as for photographs of violence or destruction by the three groups. Political justification for IRA activity accounts for one-third of the contents with reports of provocations by security forces and others providing 25% and IRA-initiated violence less than 5%-of the total.

ADAY, RONALD H. (1991, July-August). Important functions of the gerontological newsletter. *Educational Gerontology, 17,* 315-322.

Reviews 13 gerontology newspapers published between January 1987 and December 1988, representing different aging and educational organizations. Three types of newsletters were identified: aging center, organizational, and independent newsletters. Although differences were found among them, common themes were identified: essay briefs, research and training notes and summaries, resource exchange (films, books, and training materials), program showcases (demonstration programs with a practice emphasis), individual and organization accomplishments and promotions, and calendars of events.

## III-3 Readability and legibility

KINDER, DIANE; BURSUCK, BILL; & EPSTEIN, MICHAEL. (1992, Winter). An evaluation of history textbooks. *Journal of Special Education, 25,* 472-491.

Evaluates ten commonly used eighth grade American history textbooks. A single chapter concerned with post-World War II was selected in each book for analysis. Variables assessed include the following: global coherence (organizational signals, frequently used text structures), local coherence (clarity of pronoun referents), use of questions (placement and type), vocabulary (number of new words, inclusion of pronunciation and meaning), readability (Fry Readability Scale). The mean readability level was 10.9, with a range of ninth grade to the third year of college. All texts used subheadings, but only 30% of the introductions included a review of previous chapter content. Pronoun references were clear in 82% of the sections rated. The mean number of questions per chapter was 88 (range 42 to 127) with 64% being detail questions. All texts highlighted key vocabulary and gave meanings through context clues but no pronunciation guides. The results of this study, it was concluded, underscore the need for careful textbook selection.

RICHE, JAN M.: REID, JOHN C.; ROBINSON, RICHARD D.; & KARDASH, CAROLANNE M. (1991, Winter). Text and reader characteristics affecting the readability of patient literature. *Reading Improvement, 28,* 287-292.

Identifies text-based and reader-based variables that influenced comprehension of health materials by two methods: metacomprehension and cloze. Fifty-one adult outpatients with arthritis and their spouses were randomly assigned to the two methods. The reading material was three pages from a pamphlet with a readability of grade 11. The 37 subjects in the metacomprehension condition spoke their thoughts as they read, especially when something was confusing. Every fifth word was deleted in the cloze tests. Each person was tested individually. Technical words, complex sentences, and unusual phrases increased the difficulty of comprehension. When a conflict occurred between a reader's perception of common sense and the reading material, the subjects did not believe the material. They often ignored syntax and qualifying words and did not read aggressively. Patient percent scores in the cloze condition were determined with the following results: material was easy enough for independent study, 11%; it could be understood if accompanied by instruction, 27%; it was too difficult to be understood, 62%.

## III-4 Reading interests, preferences, habits

CARLSEN, G. ROBERT, & SHERRILL, ANNE. (1988). *Voices of readers: How we come to love books.* Urbana, IL: National Council of Teachers of English.

Presents a series of protocols selected from autobiographies written by undergraduate and graduate students enrolled in adolescent literature courses. Students were asked to reflect in their writing on things such as the books they remembered reading as a child, when and where they read, and who had influenced their attitude toward reading. The autobiographies were collected from classes over a period of some 30 years. In summarizing some of the overall findings from the writings collected, the authors identify conditions that promoted reading. These conditions included: availability of books and magazines, family members who read aloud, adults and peers who read, role models who valued reading, sharing and discussing books, owning books, availability of libraries and librarians, social interaction, freedom of choice in selecting materials, school programs, and personal experience. Conditions that discouraged reading included growing up with nonreaders, traumatic learning experiences, educational methodology such as book reports and the search for meaning in literary works, and the expanding social life and other demands of the teenage years.

BUGEJA, MICHAEL J. (1992, March). Why we stop reading poetry. *English Journal, 81,* 32-42.

Asks why adults rarely read poetry since they liked it when they were children. Eighty college students in newswriting and editing classes explained what happened to them. Nearly half of the students thought poetry was exciting until a teacher made a value judgment about their analysis, based on their explanations. These students did not object to analyzing poetry but did not always want to accept the teacher's interpretation as the only one. They resented having teachers criticize their interpretations. An experiment in which four students wrote poetry in a workshop is discussed. Their poems were later analyzed by other students.

LIPP, ELLEN, & WHEELER, J. PENNY. (1991, Spring). Sustaining the reading interests of academically oriented ESL students. *TESOL Quarterly, 25,* 185-189.

Identifies subjects or genres of English books that were of most interest to adult ESL

students, contrasts these interests with those of native speakers, and identifies preferred book lengths. Subjects were 206 international students in four ESL college programs who completed a questionnaire about their reading interests. The most frequently indicated interest was in world problems followed by sports, travel, mystery, and adventure. Their fiction preferences were similar to those of native speakers, but their nonfiction choices differed. ESL students preferred nonfiction. Subjects were divided into three groups on the basis of three levels of proficiency. The low group preferred very short books, under 75 pages, while most of the middle group indicated somewhat longer books. Even the high group preferred books of 75 to 100 pages.

## III-5 Readership

SEVER, SHMUEL, & BRANSE, YOSEF. (1991, October). Social aspects of reading and library use in Israel: A second look. *Library Quarterly, 61,* 389-413.

Reviews studies concerning aspects of reading and libraries in Israel at the beginning of the 1990s, contrasts them with patterns in earlier decades, and ascertains how they have been influenced by changes in education, literacy, and culture in the past generation. Most of the data were drawn from surveys conducted by the Israeli Central Bureau of Statistics. Important social factors influential during this period have been the spread of education, acculturation of immigrants, establishment of a network of libraries, and the rapid acceptance of television as a popular medium competing with reading for people's time. The percentage of active readers over age 14 (those reading at least one book a month) declined from 52.6% in 1979 to 49.2% in 1987. More than two-thirds of the Jewish libraries are located in rural areas and account for 46% of the total number of volumes in Jewish libraries. The figures for Arab libraries are lower than those for Jewish ones. Over the time studies, the average level of active readership among the Jews has barely held its ground, hovering around 50%. Both the electronic media and the decline in the government's interest in education and libraries are factors in little change in readership. The surveys indicate that young people are more active than any other group regarding reading habits. Of the 9- to 13-year-olds, 84% are registered at public libraries; for the 14- to 17-year-olds, 58.7%. Adult active readers do not make use of public libraries commensurate with their numbers.

## III-6 Library usage and services

BELL, MICHAEL, & TOTTEN, HERMAN L. (1991, July). School climate factors related to degrees of cooperation between public elementary school teachers and school library media specialists. *Library Quarterly, 61,* 293-310.

Determines if classroom teachers in academically effective public elementary schools were more disposed to cooperate with the school library media specialist in instructional help than were teachers in academically ineffective elementary schools. The study included 1,079 elementary teachers and school media specialists in 39 Texas schools similar in wealth, size, and student demographic characteristics. Classroom teachers in a Sociometric Choice Questionnaire selected from a list of their colleagues those with whom they would feel comfortable working and who had the requisite skills, knowledge, and expertise to help solve the problems. School library media specialists completed Cattell's Sixteen Personality Factor Questionnaire. Hypotheses were tested by the Mann-Whitney U and Spearman Rank Correlation procedures. Academically effective schools were found to be significantly more instructionally cohesive than ineffective schools; classroom teachers

in the effective schools were significantly more disposed to choose the library media specialist to cooperate with them on instructional problems. There were no significant relations found between the instructional choice status of the school media specialists and their measured personality characteristics.

CALLISON, DANIEL. (1991, Summer). A national survey on public library and secondary library cooperation: Do they know each other? *Indiana Media Journal, 13,* 17-21.

Conducts national telephone and mail surveys to determine the status of cooperation between public and school librarians. In a telephone survey 59% of 147 public librarians had not met the high school librarians; 39% could not name that person. The results of both telephone and mail surveys to the same cities gave evidence that there was a need for increased efforts for both groups of librarians to become acquainted and to discuss the potential for cooperative planning. They reacted to 11 opinion statements in the mail survey. The majority in both groups did not favor a joint collection development policy, but the junior high librarians favored cooperative efforts in acquisition and processing materials. Close proximity tended to be a factor associated with more frequent contacts concerning programming and identification of needed materials. No other factors (years of experience, degrees held, or amount of staff support) were associated with differences in frequency of contacts.

SWISHER, ROBERT; PYE, LINDA D.; ESTES-RICKNER, BETTIE; & MERRIAM, MALENA. (1991, November). Magazine collections in elementary school library media centers. *School Library Journal, 37,* 40-43.

Asks elementary school librarians in Oklahoma to complete a one-page questionnaire concerned with titles of magazines and uses made of them. All of the 110 responding libraries served grade 8 and lower. Amounts spent on magazines ranged from nothing to $1,300, with a mean of $348.50. The number of titles being received ranged from 0 to 75 with a mean of 23. Six in ten of these libraries did not circulate current issues but the same number did circulate back issues. The most frequently used magazines were *Ranger Rick,* followed by *National Geographic World, Boys' Life,* and *Highlights for Children.* Others were cited. Five titles appeared on both the most used and least used lists. The most frequently used magazines were thought to be associated with leisure reading (84%). One-half of the responding library/media centers have an indexing service.

VANMETER, VANDELIA L. (1991, Summer). Sensitive materials in U.S. public schools. *School Library Media Quarterly, 19,* 223-227.

Investigates the holdings of 71 elementary and 90 high school media centers on the topics of AIDS, child abuse, family violence, homosexuality, and incest in fiction, nonfiction, vertical files, and professional materials. The respondents indicated the presence of these topics in the curricula, difficulties in procuring appropriate materials on each topic, and review journals most frequently used. The study was conducted in small, medium, and large communities in 29 states. Questionnaires were completed by the school library media specialists. The three topics often included in the elementary curriculum (AIDS, child abuse, family violence) are by far the best covered in the collections. Most of the secondary specialists are actively searching for materials on these topics. A strong relation was found between topics in the curriculum and the nonfiction and vertical holdings in secondary schools. Matters of concern included lack of depth in the professional holdings, the shallow nature of all holdings, and the number of items not generally accessible to students.

MATTHEWS, DAVID, & LONSDALE, RAY. (1991, July). Library services to children in hospital: A tale of two surveys. *Library Association Record, 93,* 455-456.

Surveys 424 United Kingdom hospitals (297 responding) and 168 public library authorities (115 responding) in separate studies to determine the status of library services for hospitalized children. The first survey showed that 98% of the hospitals had library services provided by various groups, but children's wards were not always included. In some, hospital schools provided the service. Answers to questions concerning reading therapy were vague. The second survey showed that 29 of the 83 public library services to children in hospitals came from a school library service and 23 from a youth library service. A large majority (82%) of the respondents believed that children in hospitals should be considered library users. Negative comments referred largely to difficulties in serving short-stay patients.

KIRK, THOMAS G. (1992, February). Periodicals in college libraries: Are the challenges of rising subscription costs being met? *College & Research Libraries News, 53,* 94-97.

Seeks information on the status of periodicals in budgets of college libraries. Data from 50 college libraries over the last 10 to 15 years were used as the basis of the constructed survey questionnaire sent to representative U.S. colleges. A single fiscal year's data were collected at 5-year intervals. The materials budget as a percentage of the total library budget has not changed significantly between 1973/1974 and 1988/1989. The percentage spent on periodicals has increased from a mean of 31% to 42% in the same time period. The libraries have increased the number of subscriptions over the past 15 years. The volume of interlibrary loan activities grew dramatically.

AZIAGBA, PHILIP C. (1991). Library use by final year undergraduates under stringent conditions. *Library Review, 40,* 5-11.

Ascertains the library use, helpfulness and usefulness of sources of information, and use of interlibrary loans and visits to other libraries of 164 senior undergraduates from the University of Port Harcourt in Nigeria. Two major problems were encountered: low book acquisition resulting from the country's poor economic situation, and loss of a library roof which deprived students of reading room space. The principal uses these subjects made of the library were to study and research for dissertations, term papers, and special projects; to use reserved materials; and to check out and return books. The most useful sources of help were their project supervisor/lecturer and personal and library collections. The least useful was the library staff. Past undergraduate dissertations were considered the most useful information source. Problems met by the students were not knowing how to use the different sources, restraints on the constant use of the library, few study spaces, and lack of materials. Problems of students who used other libraries were related to poor reception by the staff.

GROSSER, KERRY, & BAGNELL, GAYE. (1989, November). External students and public libraries: Student perspectives. *Australian Library Journal, 38,* 303-317.

Surveys externally enrolled students at Deakin University, Geelong, Australia, concerning their library usage habits. A final response rate of 56.2% of the 1,195 external students showed that these students used public libraries more frequently than any other type of library, including their own university library. One of the major reasons for using public libraries was accessibility (convenience and ability to browse the shelves directly). Usage differed among year levels of the students. The lower the level of the course, the greater usage by external students of public libraries; the higher the level, the greater the usage of other academic libraries.

LAITINEN-KUISMA, SEIJA. (1991). Does the library net work? A survey of the public library network in Finland. *Scandinavian Public Library Quarterly, 24,* 6-9.

Surveys regional central libraries in Finland which had been in operation for nearly 30 years to determine their status, their problems, and future needs. Emphasis was placed on the functioning and cost of interlibrary lending and on the role of regional central libraries within the reshaping library network. The history of library networking in Finland is given. The rapid growth of library collaboration is mainly due to deteriorating economic situations of the municipalities. The need for interlibrary lending has increased more quickly than other lending services. Characteristics of interlibrary service were studied for a month in 13 libraries of different sizes. Of the 673 requests for interlibrary loans, most were for school studies, especially adult education. Most requests were for Finnish language books and ranged over a publication time span. Two libraries were studied in detail.

BADU, EDWIN ELLIS. (1991, Summer). The information seeking habits of graduate students in the University of Ghana. *Education Libraries Journal, 34,* 35-39.

Surveys 25 graduate students (m=21; f=4) to determine the effect of the user education program provided by the University of Ghana library on their information-seeking habits and to learn how well these students used the library resources. Subjects completed questionnaires concerning the usefulness of the program and the use of the available reference sources. From a qualitative analysis of the questionnaires it was concluded that the bibliographic awareness of these students was very low, with only one who used the libraries well to some extent. Their methods of seeking information are varied. The user course appeared to be a waste of time.

ALEMNA, A. ANABA. (1991, Summer). The role of public libraries in education: The case of Ghana. *Education Libraries Journal, 34,* 41-47.

Evaluates the educational role of the public library in Ghana. Questionnaires were completed by 200 randomly selected users in ten regional capitals in Ghana. Users provided information about public libraries such as location, use, materials, staff, and services. Most (70%) of the users are students. Of these, 75% use the library mainly to read their class notes and textbooks. They indicated that libraries were too small and suggested extensions to existing libraries. They reported that services were adequate and they were free to browse among the materials.

ONWUBIKO, M.C. (1991). Evaluation of a polytechnic library service in a developing country: The case of the Federal Polytechnic Library in Bauchi State, Nigeria. *Library Review, 40,* 52-58.

Evaluates the services of the Federal Polytechnic library, an academic library in Bauchi, Nigeria, after eight years of existence. Two different sets of questionnaires were distributed to the chief librarian and 100 (75% return) randomly selected users. Of these, 25% were also interviewed orally. A large number (62%) use the library daily. Only 15% found the library's collection relevant to their fields of interest; 77.3% indicated that the number of newspapers was inadequate. The reference services needed improvement. The attitude of the library staff toward users was considered friendly by 88.6% of the subjects. Problems frequently encountered were lack of adequate reading space and inadequate collections. The major constraint to library development in Nigeria is the paucity of funds.

NEWA, JOHN M. (1990). Libraries in national literacy education programmes in Africa south of the Sahara: The state-of-the-art. *International Library Review, 22,* 73-94.

Discusses the status of libraries and their involvement in literacy development programs in Africa south of the Sahara over the past 20 years. The impact of establishing func-

tional literacy as well as postliteracy education as part of the rural development effort is examined. Also examined is the place of library services in establishing literacy and postliteracy programs. Focus is placed on activities set up by public library personnel.

## III-7 Social and cultural influences on reading

CAPLAN, NATHAN; WHITMORE, JOHN K.; & CHOY, MARCELLA H. (1989). *The boat people and achievement in America: A study of family life, hard work, and cultural values.* Ann Arbor, MI: University of Michigan Press.

Plots the economic progress of refugees from Indochina, and studies a subsample of the children involved and their scholastic achievement. Children resided in five sites across the United States and were in schools that were in traditionally low-income, metropolitan areas. Included were 781 households with school age children. Interviews were conducted in a subsample of 200 of these households, containing 536 school age children. As a group, the children had been in the U.S. for an average of three and a half years and most came from homes where no one spoke any English upon arrival in the U.S. Educational performance was based on the children's 1984 grade point average and CAT test scores. The mean GPA of the children involved was 3.05, a B average, with 79% of children having a B or better average. Overall performance on the CAT tended to be as good as or better than the national average, with the mean score at the 54th percentile. The highest test scores were on the math and spelling subtests. The lowest test scores were found in language and reading where the percentages in quartiles I through IV were 24.2, 30.7, 29.3, and 15.8, respectively. Various factors were considered in attempting to explain the performance of the children. Despite the loss of about three years of formal schooling while in refugee camps in Southeast Asia, the age of the children in schools was almost identical to that of their nonrefugee classmates. Children in larger families (4, 5, or 6 children) did as well as or better than children from families with fewer children. The authors attribute the major reasons for the success of the children to family beliefs and practices.

## III-8 Literacy and illiteracy

WEBER, ROSE-MARIE. (1992). Literacy in the U.S. *Annual Review of Applied Linguistics, 12,* 172-189.

Reviews recent research and expert opinion concerning literacy. Changes in the meaning of *literacy* are pointed out. Issues in teaching and learning (early reading and writing, reading in the early school years, comprehension, writing), problems in learning to read and write, and second and foreign language literacy are discussed.

REBOTTINI, SONDRA. (1991). Literacy: An international perspective. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 211-218). Athens, GA: American Reading Forum.

Surveys 74 international students from 65 countries to determine how global the term "literacy" is and whether a common definition can be constructed. The international students, ages 17-46, were studying at a university in the United States. The majority of the students had received a BA or MA (87%) prior to entering the university. A questionnaire was used in conjunction with an interview which was conducted by an international multilingual surveyor. Subjects were questioned on what it means to be literate, importance of being literate and factors such as learning and schooling as they relate to literacy in their country.

Literacy appears to be associated with advanced levels of education implying that minimal skills are not enough to be considered literate. Literacy is tied to the ability to communicate with individuals within a country and individuals of other nations and emphasizes the skills of reading, writing, and speaking several languages.

BROWN, R.A. (1991, Winter). Literacy assessments in polyscriptal societies: Chinese character literacy in Korea and Japan. *Visible Language, 25,* 18-39.

Compares Japanese and Korean literacy as far as the use of *hanja* (Chinese characters) are concerned. Hanja are now rarely used in Korean writing but are extensively used in Japanese. The orthographic systems in the two countries, though superficially similar, are used in very different ways. Cloze tests were given to determine if Korean readers understood hanja. The hanja-illiterate readers were able to read with little loss of comprehension materials that contained the customary number of ordinarily used hanja. In the first test 36% of the missing characters were supplied; in the second test, 68%; and in the third, 52%. It was concluded that even with major portions of the text missing, comprehension occurred. Proportionally fewer people in Korea than in Japan are Chinese-character literate due to different school enrollment rates and different school levels when these characters are introduced. They are less necessary for reading in Korea than in Japan.

COLLINS, SHEILA D.; BALMUTH, MIRIAM; & JEAN, PRISCILLA. (1989, November). So we can use our own names, and write the laws by which we live: Educating the new U.S. labor force. *Harvard Educational Review, 59,* 454-469.

Reports on a workplace literacy program initiated in 1988 by two cooperating trade union organizations in New York City. New concepts of workplace literacy are highlighted through four case studies of specific programs stemming from the initiative. Each case study illustrates a program directed at providing adult workers with the kind of education they need to succeed on the job and to improve their lives in the community.

## III-9 History of literacy

MONAGHAN, E. JENNIFER. (1991). Family literacy in early 18th century Boston: Cotton Mather and his children. *Reading Research Quarterly, 26,* 342-370.

Explores family literacy in colonial New England through the use of diaries and other writings of Cotton Mather (1663-1728). His extant diaries covering 21 years between 1686 and 1728 include many references to the acquisition of literacy of his six children who lived beyond two years, his three wives, and three African-American slaves. Included in the discussion are uses made of literacy at home, interaction of siblings in their reading and writing, and literacy experiences enjoyed. It was concluded that writing, usually taught by men, and reading, often taught by women, were important in the family; that literacy was a communal activity; and that Mather acted as a teacher of literacy to his children and possibly his slaves. Writing, taught after reading, was considered very important. Mather's involvement with his children's literacy foreshadows many topics of interest to reading researchers today.

GALLEGOS, BERNARDO P. (1992). *Literacy, education, and society in New Mexico 1693-1821.* Albuquerque, NM: University of New Mexico Press.

Examines several aspects of literacy, education, and society in colonial New Mexico, from the reconquest in 1693 to Mexican Independence in 1821. The opening chapter focuses on the nature of the population, political structure, and economy, and establishes the social context for the period. The second chapter examines education and the forms it took; chap-

ter three presents a quantitative analysis of male literacy rates as based on signatures from military enlistment papers and also examines reading materials. Education during this period took many forms in New Mexico and occurred primarily in the home, in missions, and in schools. Education in the missions was a means of dominating the native population. The friars selected youth from the pueblos and used them to indoctrinate the rest of the natives. Censorship of reading and writing was prevalent, and the Office of the Inquisition was charged with maintaining the parameters of thought. From about 1770 on, there was a growth in the number of schools, but they tended to be plagued with shortages of paper, books, and other reading materials. Military enlistment records were used as one measure of the literacy level because it was felt that the record keeping was quite diligent, with small variation over time or among recorders. The records indicated whether the recruit signed or made a cross and also provided information concerning residence, age, and occupation of enlistees. The literacy rate among males tended to average about 32% throughout the entire period. Wills and settlements of estates provided information about book ownership. Religious materials made up the bulk of the collections, with historical, political, scientific, and medical works also appearing. The fourth chapter discusses the relation among literacy, education, and society.

MITCH, DAVID F. (1992). *The rise of popular literacy in Victorian England: The influence of private choice and public policy.* Philadelphia, PA: University of Pennsylvania Press.

Examines the rise of literacy in Victorian England. Literacy rates, determined by the ability to sign one's name at marriage, remained relatively stagnant at 50% from the mid eighteenth century through the first third of the nineteenth century, but then rose to over 95% by 1900. The rise of literacy rates coincided with the development of publicly provided mass schooling and other circumstances such as rapid urbanization, rising working-class living standards, and the development of publications aimed at the working-class market. The first part of the book examines the benefits of literacy and how those changed during the Victorian period. Literacy provided opportunities for occupational advancement for some members of the working class. By the end of the nineteenth century, an increase in leisure time permitted even unskilled laborers the opportunity to pass the time with the weekly paper or a novelette. The second part of the book deals with the costs of acquiring literacy and how they were affected by public educational policy. There was a marked improvement in the access of the working classes to subsidized elementary schools; declining fees and rising quality of teaching along with the enforcement of child labor laws and compulsory schooling led to increased school attendance. In the last half of the nineteenth century, 40 to 70% of the population gained access to subsidized schooling. The author attributes the growth in literacy to a combination of public policy and popular demand intermediate between that of grass-roots support and an elite sponsored literacy campaign.

FIELDS, VIRGINIA M. (1990, Winter). Deciphering Maya hieroglyphic writing: The state of the art. *Visible Language, 29,* 62-73.

Presents past history and current knowledge about Maya hieroglyphic writing. The study of this writing began soon after the Spanish Conquest in the sixteenth century; it has been found on a variety of media. It appeared in the latter part of the late Preclassic Period (ca. 150 B.C.-A.D. 100) and is primarily associated with documenting political history and legitimacy. Hieroglyphics were used to record the events of a ruler's life, and to document his right to the throne, his conquests, and his performance of important ritual and ceremonial acts. Historic events were documented by relating events to the mythological past. Maya writing represents the sounds and structure of spoken language. The writing system is a mixed logographic system containing both pictographic and phonetic elements. The recog-

nition of historical information from the decipherment of these hieroglyphics has significantly altered knowledge of Maya civilization.

HARRIS, WILLIAM V. (1989). *Ancient literacy.* Cambridge, MA: Harvard University Press.

Considers various aspects of literacy covering the period from the invention of the Greek alphabet to the fifth century A.D. The earliest uses of writing were for practical commercial uses, for identifying owners of objects on which they were inscribed, for perpetuating the memory of the dead, and for dedicating artifacts to a god. By the late sixth and seventh centuries B.C., the functions of writing had proliferated and the first written laws had appeared as well as written legends and records. Hipparchus of Athens is identified as the first Greek to use writing for purposes of political propaganda. During the high classical period in Athens, the functions of writing increased, especially in connection with legal and business procedures and with the public life of the city. Hellenistic Greeks developed bureaucratic uses of writing. Elementary education was offered in a few cities to all free boys and in some instances to girls as well. By the fourth century B.C. in Rome, there was a broadening of the functions of writing and it became important for military and political power. During the early Roman Empire, writing was used for such purposes as written receipts and accounts, political slogans, records of who became citizens, organizing the armed forces, circulating texts of magical spells and books, advocating religious beliefs, grafitti, letters, and commemorating the dead. By late antiquity, many literacy functions had either lost importance or had disappeared completely. In almost every sphere of life, writing was used less in the fifth century A.D. than it had been before A.D. 250. It is estimated that from 480 B.C. onwards, about 5% of the total population could be considered literate, with the rate not likely to have risen above 10% to 15%. The combined literacy total of all individuals in Rome in the period prior to 100 B.C. is unlikely to have exceeded 10%.

LENTZ, TONY M. (1989). *Orality and literacy in Hellenic Greece.* Carbondale, IL: Southern Illinois University Press.

Examines the use of oral memory, oral performance, writing for preservation, and writing for publication in Hellenic Greece. Literacy became important because of its place as a support for, or alternative to memory. Writing was secondary to the memory and performance skills of the oral tradition. Eventually, the written tradition became more than a recording device and writing came to stand as the symbol for the spoken word, and that, in turn, was the symbol of thought. There was a symbiosis of the strengths of the oral and literate traditions in ancient Greece in which the strengths of the written culture complemented the memory and performance skills of the oral tradition. Memory remained a dominant aspect of the culture with instruction in the schools largely oral and with students learning great works by heart. Performers such as singers and reciters of literature remained a vital part of the culture. Composition took place orally with scribes writing down works as authors recited them. Writing never completely broke away from the sound of the spoken word. Written words were always spoken aloud. It was not felt either necessary or desirable to separate compositions completely from their spoken form. The author proposes that the competition between writing and oral performance in which the strength of each is stressed contributes to the growth of culture.

MCKITTERICK, ROSAMOND (Ed.). (1990). *The uses of literacy in early mediaeval Europe.* Cambridge, UK: Cambridge University Press.

Investigates the ways in which literacy and orality were important in early medieval Europe. Examined are the context of literacy, its uses, level, and distribution in societies covering Ireland to Byzantium and the eastern Mediterranean between A.D. 400 and 1000.

Chapters relating to each society are authored by different individuals. Two common themes emerge. First, there was the intertwining of the symbolic function and practical uses of writing, and second, there was the possibility of a complex interrelation between writing and other elements of social and cultural practice. All chapters stress the complexities and interdependence of the issues involved and expose a variety of assumptions and beliefs about the written word in early medieval Europe. Chapter authors point out the need to distinguish between literary or intellectual and functional literacy. Orality retained a central function in medieval societies, with one essential function of writing as a record of an oral transaction. Oral forms of instruction were maintained in many of the societies examined. Literacy was not a phenomenon isolated from other media, but interacted with and complemented other forms of discourse, expression, and communication. Literacy mattered in early medieval society and had repercussions down the social scale from the king issuing directives to the freed slave who achieved a new social status by means of a written charter. Literacy had practical importance for ways of conducting business and administration, importance for observing religion, and importance for attitudes of mind of leading groups. The evidence suggests literacy was a major force in the development of European civilization.

GRENDLER, PAUL F. (1989). *Schooling in Renaissance Italy: Literacy and learning, 1300-1600.* Baltimore, MD: Johns Hopkins University Press.

Describes the organization of schools, the curriculum, and the role of education during the High Renaissance in Italy. By the beginning of the fourteenth century in Italy, the church had withdrawn from the education of most youth except for those destined for a religious life. Italy's urban civilization, through its communal governments and parents, founded schools to turn out the many notaries, secretaries, and public officials needed to meet the demands of the prevailing commercial society. The large majority of pupils were boys who came from the middle and upper classes, but some working class boys and a few girls also attended the Latin and vernacular schools that had been established. Data from late sixteenth century Venice suggest that about 26% of boys ages 6 through 15 attended formal schools. For girls, the figure was only .2%. Another 6% of boys and 7% of girls attended the Schools of Christian Doctrine. The literacy rate for boys was about 33%; for girls, between 12 to 13%. The majority of Venetian vernacular schools taught reading, writing, commercial mathematics, and accounting. Sons and daughters of the elite attended Latin schools and were given a thorough grounding in the Latin and Greek classics. The Latin curriculum was changed by humanists of the fifteenth century who substituted grammar, rhetoric, poetry and history based on Latin classical authors and texts for the verse grammars and glossaries, morality poems, and ancient poetical texts that had been the curriculum. Whether in Latin or vernacular schools, all children began by learning the alphabet, syllables, and words from a hornbook or primer consisting of a few Latin prayers. Teaching reading consisted of breaking language down into letters and then reassembling the letters into syllables, words, phrases, and sentences.

MIRONOV, BORIS N. (1991, Summer). The development of literacy in Russia and the USSR from the tenth to the twentieth centuries. *History of Education Quarterly, 31,* 229-252.

Details the history of literacy in Russia from the tenth century to the present. This history is divided into four periods. Literacy in Russia arrived with Christianity in the tenth century. Until the eighteenth century it arrived very slowly, lagging behind Western Europe and continued to lag behind in the next centuries. From early eighteenth century, under the influence of Westernization, the government took significant steps to promote education through the establishment of schools. Large scale lack of popular interest or initiative

impeded the establishment of major advances in literacy until the middle of the nineteenth century. In the 1860s there was widespread popular interest in literacy as the result of abolition of slavery, the Industrial Revolution, and urbanization. In 1908 the government adopted a law for the rapid achievement of universal literacy. The investigator includes a description and example of a procedure he developed to provide an accurate and differentiated notion of the evolution of literacy from the end of the eighteenth to the beginning of the twentieth century.

## III-10 Newspaper publication

WARD, JEAN, & HANSEN, KATHLEEN A. (1991, Autumn). Journalist and librarian roles, information technologies and newsmaking. *Journalism Quarterly, 68,* 491-498.

Surveys 105 large daily newspapers for information concerning retrieval technologies and databases used and their influence on the work of journalists and librarians. Interviews with news librarians and newsroom managers showed that the most widely adopted technologies were portable computers (97%) and fax machines (93%). Subscriptions to at least one commercial database were reported by 90%. Seventy (67%) have electronic news libraries. Shared roles of librarians and journalists were also investigated.

LACY, STEPHEN, & FICO, FREDERICK. (1991, Spring). The link between newspaper content quality & circulation. *Newspaper Research Journal, 12,* 46-57.

Hypothesizes that newspaper quality at time one (1984) is positively related to circulation at time two (1985). The hypothesis was tested by a secondary analysis of 114 newspapers for a constructed week in November 1984. Space devoted to various types of content was measured in square inches. Circulation data for each newspaper were taken from published sources. A quality index, based on one used by another researcher, was constructed which included ratios of staff-written copy to wire and feature story services, news interpretations and backgrounds to spot news reports, illustrations to text, and nonadvertising content to advertising; total amount of nonadvertising content; length of average front page story; number of wire services carried. Regression analysis was used to ascertain the nature of the relation between quality and circulation. The dependent variable was 1985 circulation; the independent one was 1984 newspaper quality. Control variables were population sizes of cities in which the papers were published. The standardized regression coefficient for the 1984 quality index was significant at the .001 level. City population was significantly related to circulation in 1985 at the .001 level. Quality accounted for a fairly large proportion of the variance.

PLOPPER, BRUCE L. (1991, Spring). Gannett and the *Gazette*: Effects of chain ownership on general news content in Arkansas' oldest newspaper. *Newspaper Research Journal, 12,* 58-71.

Determines content changes in one newspaper after its purchase by the Gannett chain. General news sections before and after the change in 12 issues each were assessed quantitatively and qualitatively. Space devoted to each of four geographic categories (local/state, regional, national, international) was recorded. Photographs and other graphics were categorized and measured. Seven content categories and two categories dictated by deadline immediacy were established. Data were recorded for all newspapers and for each one separately. The decrease in the percentage of space devoted to national and international

news was statistically significant. There was a corresponding decline in average column inches devoted to all but one of the news categories analyzed by geographic origin and topic categories. Increases in the coverage of crime and accident news, an increase in the amount of feature materials, and a decline in economic news reflected the ownership's preoccupation with reader interest. This philosophy was not effective because sales in daily circulation dropped by 5,000.

SYLVIE, GEORGE. (1991, Winter). A study of civil disorder: The effect of news values and competition on coverage by two competing daily newspapers. *Newspaper Research Journal, 12*, 98-113.

Examines and compares two general circulation newspapers in the same city but with different circulations and geographical distributions to determine differences in coverage of a disorder within the city. The final editions of each newspaper dated September 21, 22, 23, and 24, 1988 were analyzed. Stories dealing with the riot were measured and placed into seven content categories and four source categories. The newspaper coverage statistically tended to have more of an order-authority orientation than an issue-orientation. The larger newspaper carried more inches dealing with activities of the disorder, results of the disorder, activities resulting from the disorder, and reactions to the disorder than did the smaller paper. There was no difference in the intensity of the coverage. Other differences were explained.

## III-11 History of newspapers and magazines

WOLF, EDWIN II. (1988). *The book culture of a colonial American city: Philadelphia books, bookmen, and booksellers.* New York: Oxford University Press.

Studies colonial Philadelphia newspapers as well as printed colonial library and booksellers' catalogs to determine what books were bought and sold most frequently. In addition, a number of inventories found in the Philadelphia Register of Wills were examined, along with the correspondence of such individuals as Benjamin Franklin to printers and publishers. Well over 20% of all book importations included Bibles, Testaments, Psalters, and prayer books. The primers selling in largest numbers were *The Royal Primer*, first published by John Newbery in London with the earliest American edition published by James Chatlin in 1753, and *The New-England Primer*. Some 35,000 copies of the latter were sold between 1749 and 1766. The author notes that history books were extremely popular. A separate chapter is devoted to lawyers and law books. In the early years of the eighteenth century essays, poetry, and drama were the dominant literary choices; by the time of the Revolutionary War, novels dominated. All major booksellers advertised William Shakespeare's works. John Milton's works also were widely owned and advertised for sale as was John Bunyan's *Pilgrim's Progress*. Popular, too, were the works of Alexander Pope and Jonathan Swift. By mid-century, the profusion of novels shipped to the colonies from England had become quite large, with most fiction intended for a female audience. Following the war, American presses began to print American novels as well as standard English bestsellers. However, American fiction did not become popular in sales until the rise of Washington Irving and James Fenimore Cooper.

## III-12 Book publication

LOFQUIST, WILLIAM S. (1991, Fall). U.S. publishing industry. *Publishing Research Quarterly, 7,* 103-108.

Compares the first quarter book publication of 1991 with that in the previous year. The number of U.S. books sold declined by an estimated 1.9% in the first quarter of 1991 compared to that time period in 1990, but price increases averaged 8.2%. Publishers of textbooks and scientific and professional books experienced the recession the most. Gains in sales of 9% to 15% were recorded for adult trade books, juvenile hardcover books, book club books, and university press paperbacks; sales of religious books rose to 54%. The price of elementary, high school, and college textbooks as well as workbooks rose between 10.6% and 23.9%. Price increases in other book categories were modest. Technical, scientific, and professional books form the largest export category.

LOFQUIST, WILLIAM S. (1991/1992, Winter). U.S. publishing industry. *Publishing Research Quarterly, 7,* 71-75.

Compares the extent of book publication during the first six months of 1991 with that of a similar time in 1990. Sales were 6.4% higher in the latter period. The U.S. consumer population remains an active buyer; sales in bookstores improved. The low tax revenues entering state and local treasuries are responsible for fewer purchases of school, library, and institutional textbooks and technical, scientific, and professional books. Elementary and secondary textbook sales were 4.6% ahead of 1990, but price increases averaging 8% to 14% pointed to a decline in unit shipments. Periodical shipments have been declining since 1989. Book prices in the second quarter of 1991 averaged 5.4% higher than in the second quarter of 1990.

MUTTER, JOHN, & O'BRIEN, MAUREEN. (1991, August). The summer bookselling climate—HOT and MILD and unseasonably COLD. *Publishers Weekly, 238,* 19-22.

Surveys booksellers throughout the United States and Canada to determine the status of book sales in Summer 1991. They varied, with the worst results in the Northeast and with some areas showing extraordinary growth. Booksellers reported that there was more price resistance than in previous years, that hardcover sales were down but paperbacks up, and that remainders are an important part of their inventory. Popular books and ones with disappointing sales are listed as well as titles that are predicted to be favorites in the fall publication season.

## III-13 History of reading instruction and testing

BARTINE, DAVID. (1992). *Reading, criticism, and culture: Theory and teaching in the United States and England, 1820-1950.* Columbia, SC: University of South Carolina Press.

Follows the weaning of American theory and pedagogy of reading from the British and discusses the cultural and ideological implications of the choices American educators made between 1820-1950. There was a heritage of British reading studies from the eighteenth century that offered American educators two traditions from which to draw. Romantic theory and pedagogy were well established in England by the end of the eighteenth century; the pragmatic tradition, the second of the two, was eclipsed by the former. American reading theory was shaped in part by a proposal that culture be studied for the sake of assuring its preservation. Romantic theorists felt that the interests and demands of a mass reading public could threaten standards of taste that the culture had achieved; pragmat-

ic theorists held the position that reading should be a democratized activity with everyone having the opportunity to attain the most sophisticated stages of reading. During the nineteenth century, there was a desire to impose unity on the diversity in American culture and education. The McGuffey readers contributed to the homogenizing and spiritualizing goals held and responded to the desire for education for a moral society and for a minimal core of shared knowledge and values. Scientific investigations in reading also played a large role in blinding American reading studies to the alternatives of the pragmatic tradition. The study of reading quickly became fragmented and cut itself off from the past. Anything done prior to about 1920 was thought to be prescientific and little attention was paid to it, thereby perpetuating assumptions of romantic theory. The author contends that in the name of scientific progress, American reading theory perpetuated the assumptions of romantic theory and both regressed and stagnated. The emphasis was on the individual word as the unit of meaning with little attention to contexual meaning or to structures connecting and displaying the relations of words. In the 1930s, the New Criticism movement led to major changes in the concepts of critical reading and literary criticism. The movement called attention to the need for closely scrutinizing linguistic structures and led eventually to a shift from meaning to use. New Criticism, however, still tended to elitism as it focused on the college population. It is argued that pragmatic reading theory and pedagogy have not yet found a place in preuniversity American education. Because of this, the possibilities of fulfilling the democratic vision that the greater populace can be taught to read have not yet been met.

TRACHSEL, MARY. (1992). *Institutionalizing literacy: The historical role of college entrance examinations in English.* Carbondale, IL: Southern Illinois University Press.

Examines the history of college examinations in English, with particular current emphasis on the verbal portion of the Scholastic Aptitude Test (SAT). The author begins the book discussing formal and functional definitions of literacy and how the terms have shaped debates over academic standards. College entrance exams have played the dual functions of exclusivity and inclusiveness. Administrative boards of major private northeastern universities were initially dominated by clergymen, but between 1890 and 1930 these boards came increasingly under the control of corporate officials from major financial agencies in the United States. Largely through their efforts, the course of American higher education increasingly emphasized social efficiency and rational decision making. The evolution of standardized literacy testing proceeded from regionally based internal efforts to establish the canon of English studies' professional knowledge base to concern for the precise measurement and control of the product of education. Initial steps toward the standardization of college entrance requirements in English were taken in the latter years of the nineteenth century in New England and gradually moved westward and southward. Essay type examinations dominated until the late 1920s when objective examinations were introduced. Representatives from the colleges and secondary schools of the Mid Atlantic states and Maryland formed the original College Entrance Examination Board (CEEB), whose first English examination was administered in 1901 and was divided into two parts, both of which were dependent on the candidate's ability to reproduce factual material and passages of text from memory. In 1916, the board devised a new examination option designed to shift the emphasis from memory to power. In 1926, the CEEB offered its first SAT along with its standard battery of achievement tests. The early SAT was modeled after a number of early IQ measures and consisted primarily of multiple-choice questions. It was much more time and cost efficient than the essay tests previously given. It was designed to provide supplementary information to high school records and achievement tests and was to provide an assessment of academic potential to succeed in college. By 1942, essay exams were abandoned altogether. By 1960 an estimated 80% of all U.S. college applicants were required to take

some form of examination, with about three applicants taking the SAT for every one who took achievement tests. By the late 1970s, the proportion had grown to five SAT takers to every one applicant taking achievement tests. The supplemental nature of the SAT was often forgotten. The final two chapters of the book focus more specifically on the contents of the verbal portion of the SAT, how the compartmentalization of literacy as a professional knowledge base has been enforced by the format of the exam, and how the exams have been administered.

## III-14 Juvenile books

ALTMANN, ANNA; BERTRAM, SHEILA; & FIELD, MARY. (1991, December). Reviews of young adult books in Canadian reviewing serials. *Canadian Library Journal, 48,* 385-391.

Examines reviews of books for young adults from 1987-1988 in five Canadian reviewing sources, scanned directly for reviews of relevant titles. The study identified 732 reviews of 644 titles, 60% being nonfiction and 40% fiction. Of the 644 titles, 91% were reviewed only once, with fiction titles having more multiple reviews than nonfiction. There were 142 publishers responsible for the 644 titles, 51% being published by 14 companies. A small sample of reviews (33) was used for qualitative analyses. Two instruments were used to determine whether each sentence in the review was primarily descriptive, analytical, or sociological. Only 46% were found to be analytical or sociological. Most reviews (88%) were positive.

DOLL, CAROL A. (1991, Fall). Which book will win the Caldecott? *Publishing Research Quarterly, 7,* 77-89.

Evaluates reviews of children's picture books that later won the Caldecott Medal and asks the question if it is possible to predict from these reviews the title that will win the award. Reviews of the past 25 winners were taken from seven publications. All reviews were published before the winners were announced. There was no evidence that the reviews treat the Caldecott winners differently from general books in terms of critical themes or artistic elements. Some differences were found between the winners and other books: longer and more frequent reviews and longer discussions of the art work in the winning titles. It was concluded that it was not possible to predict future Caldecott winners with certainty but chances are high that the next medals will be awarded to the illustrator of a book reviewed widely by reviewers who discuss the illustrations.

HOLMES, COOPER B., & HOLMES, DEE ANN. (1992, February). Women and men authors' portrayal of curiosity in young children's literature. *Psychological Reports, 70,* 258.

Examines how 45 female and 20 male authors of children's picture/story books portray curiosity. The data for the 116 instances of curiosity were obtained from an earlier study. Women authors generated 89 instances of curiosity; men, 27. For women, 67 were neutral; 11, positive; 11, negative. For men, 22 were neutral; none, positive; 5, negative. Chi-square analyses showed no significant differences between the two groups of authors in how they portrayed curiosity. Both groups had a strong tendency to portray curiosity neutrally.

REIMER, KATHRYN MEYER. (1992, January). Multiethnic literature: Holding fast to dreams. *Language Arts, 69,* 14-21.

Investigates the current status of multiethnic literature for children. One hundred stories were analyzed from three lists of recommended books for children and 85 stories in two basal reading series, Grade 3. Main characters were white in 50% to 67% of the basal randomly selected reader stories and in 89% to 100% of the suggestions in the book lists. African-American main characters were found in 10% to 19% of the basal reader stories and 4% to 7% in two of the three lists. Other ethnic groups were poorly represented in all of the stories analyzed. Similar percentages were noted for the illustrations of the ethnic groups. It was concluded that students are not exposed to much cultural diversity in most of the tradebook reading they do in school.

## III-15 Censorship and freedom of the press

MOFFETT, JAMES. (1988). *Storm in the mountains: A case study of censorship, conflict, and consciousness.* Carbondale, IL: Southern Illinois University Press.

Presents a case study of the schoolbook controversy in Kanawha County, West Virginia, in the mid-1970s. The author was senior author/editor of one of the reading and language arts series whose adoption was opposed by some parents in the rural Appalachian community. Part of the book is a presentation of comments collected from various involved individuals. The comments were collected in the form of transcripts of interviews with some citizens of the community or of written comments about specific selections in the disputed textbooks. Additional chapters in the book deal with an analysis of the contents of some of the materials. The disputed books, based on a recommendation of the textbook committee, had been ratified by the school board when one of its members objected that the review time had been too brief and asked for copies of all books. The board member objected to the books and charged that they were unpatriotic, filthy, and trashy. The debate between those supporting the textbooks and those opposing them quickly heated up and involved appearances on television, stories in the local newspapers, and the involvement of the PTA, the local NAACP, and the YWCA. Church groups split between mainline, nationally affiliated denominations and local, unaffiliated, fundamentalist congregations. When school opened in the fall, the controversy expanded and received national attention in the media. Parents in some of the rural districts had their children boycott the schools. Picket lines were formed by some parents and led to strikes by coal miners and city bus drivers. The school board withdrew the books for a review by a citizens' group; high school students protested the removal of the books with a walkout. Violence in the community escalated to the point where the superintendent ordered all 121 public schools closed for a four-day weekend during which all extracurricular activities were banned. During the period of review, one elementary school was dynamited, while others were targets of gunfire, fire bombs, and acts of vandalism. In a meeting held amid fear of additional violence and with strong security measures implemented, the board authorized the return of most of the books to the classroom, with a provision that parents could sign a form if they objected to having their children read any specific books. Demonstrations, boycotts, and rallies continued through the winter and spring. An alternative school was established but abandoned for lack of applications. By the following fall, the board restored all the controversial texts to the classrooms without any objections. However, the author notes that the aftermath was that no publisher since has presented schools with textbooks of a comparable range of subjects, ideas, and points of view to those in the controversy.

MARTINSON, DAVID L., & KOPENHAVER, LILLIAN LODGE. (1992, January/February). How school superintendents view student press rights. *Clearing House, 65,* 159-164.

Explores views of 37 public school superintendents in Florida concerning student press rights. The superintendents completed a five-page questionnaire in which they gave, on a Likert-type scale, their reactions to 25 statements and provided information about their schools. Space was left for any comments they wished to add. Results showed that these superintendents are not vigorous supporters of a free student press. They believe that since the school boards pay some of the bills, administrators should have some control over what is published. They wished to be informed of anything of a controversial nature before the item was published. They considered school news writing to be a learning experience. Superintendents were not more supportive of student rights than principals were as found in another study.

BLANCHARD, MARGARET A. (1992, Spring). Free expression and wartime: Lessons from the past, hopes for the future. *Journalism Quarterly, 69,* 5-6.

Examines eighteenth and nineteenth century wars to show problems related to censorship encountered by the press. Issues confronted in the Persian Gulf War date to earlier times and wars: censorship of information reaching the American people during wartime, deliberate twisting of information by government sources to manipulate public opinion, unwillingness to tolerate dissent during wartime, and the attempt to limit free speech. Examples of wartime restrictions were given for the Revolutionary War, War of 1812, the Mexican War, and the Civil War. Government efforts to restrict dissent and press activity in wartime have continued unchanged for 200 years.

COBB-REILEY, LINDA. (1992, Spring). Not an empty box with beautiful words on it: The First Amendment in progressive era scholarship. *Journalism Quarterly, 69,* 37-47.

Examines legal literature dealing with the meaning of free speech and press during the Progressive Era from 1900 to 1914. The analyses of legal treatises, papers, and law journal articles showed that legal scholars of this time gave new interpretations to the constitutional free speech and press guarantees. The First Amendment was interpreted broadly to protect criticisms of government and prohibit punishments for seditious libel. The writers wrote about practical applications of First Amendment theory, drew lines between protected and unprotected speech, and addressed the question of who was protected by constitutional guarantees. The early twentieth century legal writers provided a turning point in the evolution of free press and speech value.

TEETER, DWIGHT L., JR. (1992, Spring). The First Amendment at its bicentennial: Necessary but not sufficient? *Journalism Quarterly, 69,* 18-27.

Questions whether the First Amendment, the eighteenth century protection for freedom of the press, is sufficient for the challenges of the nation's press today. Prior restraint is alive today in military censorship as in writing about the Persian War. Many of the problems that faced newspapers when the First Amendment was written are still present. The study looks at prior restraints and seditious libel and finds instances today which are called potentially threatening.

PARRAMORE, JAMES R. (1992, Spring). State constitutions and the press: Historical context and resurgence of a libertarian tradition. *Journalism Quarterly, 69,* 105-123.

Analyzes state constitutional press clauses and shows their relation to federalism and their importance today. More than a decade before the First Congress met in New York, many of the rights in the U.S. Constitution were described in various state constitutions. The contemporary significance of these early state constitutional attempts to protect press freedom in the United States are discussed. Legal doctrines and conceptual frameworks developed over the past 200 years have led to increased reliance recently by state courts on state constitutional press clauses. Specific issues, with examples of press freedom affected by modern court decisions, are discussed. State courts are again wielding power with increasing levels of consistency and confidence. They can adopt higher standards than federal ones for press protection by drawing on their state constitutions.

HALE, F. DENNIS. (1992, Spring). Free expression: The first five years of the Rehnquist court. *Journalism Quarterly, 69,* 89-104.

Analyzes opinions rendered by the Rehnquist and previous courts concerning free expression issues and compares the results of the different courts. All cases analyzed during the 5 years 1986 to 1990, involved freedom of speech of the press and mass media. Each decision was coded under nine headings. Free expression cases had a better than average chance of being reviewed by the court, a first step. When judgments were made, free expression prevailed 59% of the time, higher than the 48% under Burger but lower than the 73% under Warren. A drop in support was found during the fifth year from 64% during the first 4 years to 36% in the fifth year.

MOORE, ROBERT C. (1992). *The political reality of freedom of the press in Zambia.* Lanham, MD: University Press of America.

Examines the history and the current role of the media in Zambia. The print press consists of two newspapers: the *Times of Zambia,* the oldest newspaper, and the *Daily Mail.* The *Times* was established by a British multinational corporation prior to the emergence of Zambia as a nation. It was published under its present name in 1965 and taken over by the government in 1975. The *Mail* was acquired by the government in 1965. All radio and television in Zambia is government owned and operated. All other forms of mass media have essentially disappeared from the country, including the importing of foreign news magazines. The author concludes with a proposal for establishing freedom of the press and other media in Zambia.

## III-16 Effects of reading

STUCKEY, J. ELSPETH. (1991). *The violence of literacy.* Portsmouth, NH: Heinemann.

Surveys the ideology, theory, and practice of literacy in an effort to explore and question its foundations. The premise of the book is that the common speculations about the nature and need for literacy are misguided, because the assumptions about economic and social forces on which they are based are faulty. It is argued that the context of literacy is one of entrenched class structure in which those with power have a vested interest in keeping it. The book argues that a number of present practices in research, theory making, and teaching are not merely misguided but destructive. Current approaches to literacy corroborate other social practices that prevent freedom and limit opportunity.

PRITCHARD, DAVID, & BERKOWITZ, DAN. (1991, Autumn). How readers' letters may influence editors and news emphasis: A content analysis of 10 newspapers, 1948-1978. *Journalism Quarterly, 68,* 388-395.

Focuses on the relation between references to crime in letters to the editor and crime reports on front pages and in editorials from 1948 to 1978. A total of 3,614 issues in ten newspapers from eight cities were analyzed. The investigators created 93 four-month time intervals for a time-series analysis. The effects of previous content on subsequent content were tested by logged partial coefficients of correlation. Each newspaper was analyzed separately. Moderate support was found for the hypothesis that attention to crime in letters would be positively related to crime on the front page and in editorials. In six of the ten papers the hypothesis was supported for the front page or editorials or both. Of the 40 possible relations involving letters, 12 were very significant. It was concluded that the amount of attention given to crime in editorials and front page news cannot be fully understood without reference to letters to the editor.

WEAVER-LARISCY, RUTH ANN, & TINKHAM, SPENCER F. (1991, Autumn). News coverage, endorsements, and personal campaigning: The influence of nonpaid activities in congressional elections. *Journalism Quarterly, 68,* 432-444.

Examines the influence of traditional nonpaid campaign practices of incumbents and nonincumbents on U.S. congressional campaign results in 1982. The sample included 272 candidates, 113 (41.5%) being incumbents. Subjects indicated the extent of use and ratings of usefulness of each practice. Statistical analyses used were discriminate analysis, stepwise regression, and factor analysis. Usage of nonpaid activities for both groups of nominees was quite similar. Both groups ranked small group appearances as the most used, followed by free newspaper coverage. Nonincumbents ranked endorsements from state and national leaders, national party advertising, and door-to-door canvassing significantly more than incumbents. The latter group used newspaper editorials significantly more than the nonincumbents. For incumbents, appearances before small groups enhanced voting results; for nonincumbents, external endorsements and editorial support were positively related to voting results.

MCPHETERS, REBECCA. (1991, December). The effectiveness of print advertising. *Journal of Advertising Research, 31,* 5-12.

Measures the effectiveness of magazine advertising in generating sales. Differences were found in buying behavior between 8,700 households that purchased a specific issue of *Family Circle* and 90,000 demographically similar households not known to have purchased this issue of the magazine. Scanner data identified purchases made in 299 stores. Sales of all brands which ran one to four color pages were measured over a 28-week period. Volume effects among households with known exposure to other advertising were isolated. The study showed that print advertising was effective in increasing sales. Consumers seeing the ads spent 7% more than the control group; cumulative sales for the period were higher for the exposed group. Includes case stories for three advertised products.

## III-17 Reaction to print

WEAVER, DAVID, & DANIELS, LEANNE. (1992, Spring). Public opinion on investigative reporting in the 1980s. *Journalism Quarterly, 69,* 146-155.

Compares findings from four telephone surveys concerning the public's perception of the importance of investigative reporting and the acceptability of different reporting methods. A 1980 Chicago study, a 1981 national Gallup survey, a 1984-1985 national poll, and a 1989 statewide Indiana poll are described and found to be similar in questions asked of subjects. The high and widespread levels of support for investigative reporting found in the Chicago study did not exist in the other studies. The majority of the Chicago subjects did

not approve of one technique—paying for information. The subjects in the other studies failed to give support to any of the techniques: hidden camera, hidden microphone, reporters not identifying themselves as reporters, use of anonymous sources, paying for information, and reporters posing as someone else. The majority of subjects in all studies consider investigative reporting to be important. Approval of this reporting is not predicted by age, race, gender, education, income, political party, newspaper or television viewing habits, or beliefs about keeping abreast of the news. Community level, rather than individual level, appears to be a better predictor.

HOMER, PAMELA M., & YOON, SUN-GIL. (1992, March). Message framing and the interrelationships among ad-based feelings, affect, and cognition. *Journal of Advertising, 21,* 19-33.

Presents a structural equation test of the interrelation among ad-induced emotional and cognitive responses, attitude toward the ads, brand attitudes, and purchase intentions. Subjects were 244 undergraduates: 125 subjects in the positive framing condition of the ad and 119 subjects in the negative framing condition. They read two booklets containing the independent and dependent variables. Feelings were found to affect brand attitudes directly and indirectly by attitudes toward the ad. Differences between positive and negative framed print were examined. Brand related thoughts were more important in brand attitude formation when the message was negatively framed.

## III-18 History of books and print

KWASITSU, LISHI. (1991, July). Caribbean publishing, 1711-1900: A preliminary subject analysis. *Scholarly Publishing, 22,* 231-240.

Categorizes 1,206 books published in the Caribbean between 1711 and 1900. Names of publications were taken from the six-volume catalog of the West India Reference Library and from several bibliographies. The first Caribbean print shop was opened in 1718 by Robert Baldwin in Spanish Town, Jamaica. During the 180-year period, of the total number of publications issued, 443 (43%) were in social studies, followed by historical and geographical publications with 245 (24%). In third and fourth places were technology and religion. Within the social science category, 182 (41%) were works in law. Reasons for the publication of certain books were numerous and are included in the report. Jamaica accounts for 800 (78%) publications, followed by Guyana with 73 (7%), and Trinidad and Tobago with 33 (3%).

KAPR, ALBERT. (1990). Concerning the beginning of printing in 15th-century Strassburg. *Visible Language, 24,* 238-253.

Ponders the question of when and where Johannes Gutenberg invented the art of printing. The general notion has been that he invented printing in Mainz in 1440. However, Gutenberg lived in Strasbourg from 1443 to 1444. The date of 1440 is uniformly presented in the records; Mainz is given three times as the place and Strasbourg, twice. Based on several examples of evidence, it was concluded that printing was invented in 1440 in Strasbourg. Mainz was the birthplace of the inventor and was influential in furthering the art of printing.

III-19 Research techniques

KAMIL, MICHAEL K., & SHANAHAN, TIMOTHY. (1991). Academic libraries and research in the teaching of English. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 83-90). Chicago, IL: National Reading Conference.

Attempts to describe the relation between library quality and research productivity in the area of English education. Institutions were rank ordered according to (1) number of doctoral degrees awarded in reading and in writing-language-literature (count by American universities and colleges from 1983-1985); and (2) number of research publications in reading and in writing-language-literature (total publications in journals and books tallied by institutional affiliation listed with publication). These indexes were compiled for reading (385 publications, 167 doctoral degrees) and for writing-language-literature (312 publications, 158 doctoral degrees). The 25 most productive institutions in each of the four rankings were selected, resulting in the identification of 49 highly productive institutions. An additional 48 institutions were randomly selected to serve as the control group. A survey was sent to the 97 institutions asking about characteristics of library holdings in general and English education libraries specifically. Survey responses from 60 institutions were tabulated, analyzed, and used as predictive variables in multiple regression analyses. Research productivity can be predicted by seemingly simple variables (size of library, operating budget, serials) although none alone account for the variance in productivity ranks.

SLATER, MICHAEL D. (1991, Autumn). Use of message stimuli in mass communication experiments: A methodological assessment and discussion. *Journalism Quarterly, 68*, 388-395.

Examines current practices in mass communication research as used in reports in six major communication research journals. The following message variable strategies are reviewed with suggested consequences regarding interpretation and generalizability being explained: within vs. between message designs and types of confounding; single and multiple message stimuli; messages-random vs. fixed effects. A proposed conceptual framework for mass communication researchers is outlined in the context of recent controversies about experiments, including an interpretation of when to treat message stimuli as random versus fixed effects.

## *IV. Physiology and psychology of reading*

IV-1 Physiology of reading

WILLIAMS, SHEILA M.; SANDERSON, GORDON F.; SHARE, DAVID L.; & SILVA, PHIL A. (1988, December). Refractive error, IQ, and reading ability: A longitudinal study from age 7 to 11. *Developmental Medicine and Child Neurology, 30*, 735-742.

Undertakes a longitudinal study to note the nature of the association between refractive error and cognitive abilities. Included in the sample were 537 children in New Zealand, all of whose eyes were refracted under cyclopegia by an optometrist. Pupils were divided into five groups based on their refractive errors: (1) myopic in at least one eye, with the better eye being emmetropic or hypermetropic; (2) at risk of developing myopia; (3) hypermetropic; (4) other visual problems; and (5) none of these visual problems. Socioeconomic sta-

tus, maternal intelligence (SRA Verbal Test), the Family Relations Index, family size, ordinal position in family, and other questionnaire data were obtained. By age 11, 4.3 percent of the 537 children had developed myopia; of these, 17 had normal distance visual acuity at age 7. There were 66 premyopic children and 26 with hypermetropia by age 11. An additional 31 children had other visual problems, while the remaining 391 showed no significant refractive error. The 31 with other visual problems and children with a Full-scale IQ less than 70 were excluded from the final analysis. For Verbal IQ, while there were no differences at age 7, by age 11 the means for both the myopoic and premyopic groups were higher than the mean for children without visual problems; hypermetrophic children had Verbal IQ scores that were significantly lower than did children with no visual problems. On Performance IQ, at both ages myopic children scored better than those without visual problems.

CORNELISSEN, PIERS; BRADLEY, LYNETTE; FOWLER, SUE; & STEIN, JOHN. (1992, April). Covering one eye affects how some children read. *Developmental Medicine and Child Neurology, 34*, 296-304.

Compares differences in the pattern of reading errors between text viewed binocularly and monocularly in children with unstable binocular control. Subjects were 32 children identified with the Dunlop Test (DT) as having unstable binocular control and 32 controls with normal binocular control, matched for reading age. IQ was assessed with the British Ability Scales (BAS) and a version of a four-word rhyme detection task was the phonological test measure administered. The British Picture Vocabulary Scale was used to ensure that there were no systematic vocabulary differences between the two groups. Children were given the BAS single-word reading test and then asked to read two word lists, presented in paragraph format, from a page on which all the experimental words were printed. One paragraph was read with both eyes; the other with only the right eye. The difficulty level of the paragraphs read was determined on the basis of the BAS reading age. The total number of errors, the total number of nonword errors, and the total number of refusals were counted. Controlled variables included IQ, CA, RA, and phonological ability. Neither the total number of errors nor the refusals to attempt words varied as a function of viewing condition or performance on the DT. The proportion of nonword errors made by children who failed the DT was lower when reading with one eye as opposed to two. No differences were found between the two viewing conditions for children who had passed the DT. Children with higher reading ages and better phonological skills made more nonword reading errors. The findings are interpreted as supporting the idea that unstable binocular control can affect reading due to interference between the images of the two eyes.

INHOFF, ALBRECHT WERNER, & BRIIHL, DEBORAH. (1991, March) Semantic processing of unattended text during selective reading: How the eyes see it. *Perception & Psychophysics, 49*, 289-294.

Examines, through the use of a selective reading task, the prevalence of spontaneous shifts of attention in eye movements and their effects on the representation of unattended text. Subjects included 16 undergraduates who participated for course credit. Materials consisted of 12 passages, each containing between 24 and 36 words, and each extending across three lines of text. Passages contained target words essential for the answering of multiple-choice questions. Two passages occupied alternating lines of text—one passage occupied the even numbered lines and the other, the odd numbered lines. Three multiple-choice questions accompanied each passage. Two lines of text were presented simultaneously on a screen: all text on one line was in lowercase and all text on the second line was in capital letters or vice versa. Subjects were asked to read and attend to the first line only and then to depress a key which removed the first two lines and presented the next two. When a passage was finished, subjects answered six multiple-choice questions, of which three referred to tar-

gets of the attended passage and three to targets of the unattended passage. Four versions of each passage were prepared, two versions for use as attended and two versions for use as unattended. Versions were in lowercase and uppercase, and were presented in counterbalanced order. Readers occasionally fixated unattended text, as indicated by their ability to answer questions from unattended passages. Subjects inadvertently shifted attention to unattended text, as indicated by short duration eye fixations on the unattended passages. In the absence of overt eye movements to neglected text, there was no longer any indication that readers obtained useful semantic information from unattended text.

VITU, FRANÇOISE. (1991, September). Against the existence of a range effect during reading. *Vision Research, 31*, 2009-2015.

Tests the existence of a range effect phenomenon in a reading situation. The range effect phenomenon holds that saccades toward isolated targets presented at variable eccentricities in one block of trials overshoot the near targets and undershoot the far targets. Eight adult native French speakers served as subjects and viewed two words on a screen in the right peripheral field. The first word appeared visible or masked in peripheral vision: the second word was spaced one character space from the first or test word and was always masked until the eye fixated it. Subjects were to read the test word and then the second word and to decide if they were the same. Two word lengths, five and nine letters, and five possible eccentricities of the test word were mixed in one block of trials. The eye's initial landing position in words was measured as a function of the eccentricity at which the words appeared. Findings indicated that for both word lengths the eye's initial landing position in the test word did not depend on the eccentricity of the test word or on the condition of peripheral preprocessing. In all conditions, the eye showed a preference for landing on the third letter for five-letter words and on the third or fourth letter for nine-letter words. Thus the results were against the existence of a range effect during reading.

OSAKA, NAOYUKI, & ODA, KOICHI. (1991, July). Effective visual field size necessary for vertical reading during Japanese text processing. *Bulletin of the Psychonomic Society, 29*, 345-347.

Records eye movements during vertical reading of Japanese text to determine effective visual field for reading vertical text. Eighteen different sets of Japanese text, each about 352 characters in length, were employed with the four college students who served as subjects. Text was composed of both kanji and hirakana/katakana characters. Text was viewed on a computer screen with six different window sizes used: 1, 2, 4, 8, 12 characters and free viewing. Data were collected on saccade length and fixation duration. Saccade length increased and fixation duration decreased as a function of increasing window size. The effective visual field was found to be 5 to 6 characters. The span appears to be similar in size to that found during horizontal reading of Japanese text.

TOMA, ROBERTA J. (1991, June) Correlates of modified Stroop tasks, reading ability, and mental ability among college students. *Perceptual and Motor Skills, 72*, 961-962.

Explores the relation between scores on modified Stroop tasks and reading comprehension and vocabulary scores from the PPVT and the NDRT for 13 male and 13 female undergraduates. Each subject viewed 40 Stroop tasks, 20 projected in the right visual field, and 20 projected in the left visual field, and named the lined drawings and embedded or scrambled words as rapidly as possible. Significant Pearson coefficients of correlation were noted between errors in the right visual field and errors on the NDRT vocabulary subtext. Errors in the left visual field correlated significantly with the NDRT comprehension subtest.

BAKKER, DIRK, J. (1992, February). Neuropsychological classification and treatment of dyslexia. *Journal of Learning Disabilities, 25*, 102-109.

Argues from evidence that initial learning to read is mediated by the right hemisphere of the brain, while proficient reading is associated with the left hemisphere. It is argued further that premature reliance on left hemisphere reading strategies could result in L-type dyslexia, characterized by hurried and inaccurate reading. A second type of dyslexia, P-type, is characterized by a slow and fragmented type of reading, and may be the result of an inability to shift from right hemispheric reading strategies to left hemispheric strategies Research into the L/P typology is presented and discussed, and the classification is considered to be valid.

SPAFFORD, CAROL, & GROSSER, G.S. (1991, August). Retinal differences in light sensitivity between dyslexic and proficient reading children: New prospects for optometric input in diagnosing dyslexia. *Journal of the American Optometric Association, 62*, 610-615.

Compares brightness thresholds of dyslexic and proficient reading children. Dyslexic subjects were seven Caucasian males, ages 9 to 12 years, from lower-middle to upper-middle income families. Control subjects were seven proficient readers matched with the dyslexic group on age, IQ, and SES. The GMRT, the Connecticut State Mastery Tests, and teacher judgment determined the reading proficiency of the control group to be at or above grade level. Each subject's eyes were tested for deviation from proper fixation. To determine peripheral sensitivity, the peripheral 30/60 threshold test was administered. Sensitivity data for each eye were displayed automatically in the form of quadrant totals. Totals were grouped (1) horizontally into hemifield form for upper versus lower hemifield comparisons, (2) vertically into hemifield form for nasal versus temporal hemifield comparisons, and (3) eye totals for left versus right eye comparisons. T-test comparisons indicated dyslexic subjects had lower sensitivity scores than proficient readers for upper hemifields. Lower hemifield data revealed no significant results.

ACKERMAN, PEGGY T.; DYKMAN, ROSCOE A.; HOLLOWAY, CAROL; PAAL, NICHOLAS P.; & GOCIO, MICHELLE Y. (1991, November). A trial of piracetam in two subgroups of students with dyslexia enrolled in summer tutoring. *Journal of Learning Disabilities, 24*, 542-549.

Describes a 10-week summer tutoring program for 60 children that emphasized word-building skills. Children ranged in age from 9 to 13 years and were classified as dyslexics using a discrepancy index comparing scores of the WISC-R and the WRAT-R. One week prior to tutoring, children took three WRAT-R subtests, the GORT-Revised, the Decoding Skills Test, the Boder Test of Reading-Spelling Patterns, the Bradley Sound Categorization Test, the Digit Span of the WISC-R, the Rapid Alternating Stimulus Test, and a timed counting from memory test. The children were subtyped as dysphonetic or phonetic on the basis of scores. All subjects were randomly assigned to receive either a placebo or piracetam, a memory-enhancing drug. Each child was individually tutored for two 1-hour sessions a week for 10 weeks using a structured protocol. Tutors knew neither the drug status nor the subtype classification of the children. Tutoring included 20 minutes of word building, 20 minutes of spelling instruction, and 20 minutes of discourse reading practice from tradebooks. Medication was taken twice daily. Posttests were the same as the pretrial texts with the exception of the Sound Categorization Text. The phonetic group improved significantly more in word recognition than did the dysphonetic group. Those on medication did not make greater gains than nonmedicated subjects in any aspect of reading. The phonetic subgroup on piracetam gained more in word recognition than any other subgroup but did not score significantly higher than the phonetic subgroups on placebo.

KOENIG, OLIVIER; KOSSLYN, STEPHEN M.; & WOLFF, PETER. (1991, October). Mental imagery and dyslexia: A deficit in processing multipart visual objects? *Brain and Language, 41*, 381-3941.

Examines left- and right-hemisphere processing during image generation in normal and dyslexic subjects. Subjects were 12 right-handed male dyslexic volunteers ranging from 16.9 to 18.10, with a mean full scale IQ of 114 and a mean reading ability of 3.7 as measured by the GORT. Control subjects were 12 right-handed male Harvard University undergraduates. Using a divided field methodology, subjects were shown a pattern in a 4 (columns) by 5 (rows) grid. The pattern was then masked by a screen and subjects were shown a grid displaying an *X* mark in one of its cells either to the left visual field, the right visual field, or central vision. Subjects were asked to tell if the *X* mark would be covered if the pattern were still present. Error rates and computer recorded response times were analyzed in separate ANOVAS. Results indicated dyslexics had more difficulty generating letter pattern images, but not novel pattern images, than did control subjects. It is speculated that dyslexics may have selective difficulty with integration of visual information stored in long term memory.

FLOWERS, D. LYNN; WOOD, FRANK B.; & NAYLOR, CECILE E. (1991, June). Regional cerebral blood flow correlates of language processes in reading disability. *Archives of Neurology, 48*, 637-643.

Tests, in three experiments, the hypothesis of abnormal left hemisphere activation in reading-disabled subjects during language task performance. Experiments shared the same equipment, stimuli, and procedures but with different subjects. The first experiment included 69 adults with no history of reading problems; Experiments 2 and 3 included 83 adults who had attended the Orton Reading Center as children. Subjects performed three tasks involving verbal memory, auditory perception, or spelling analysis. They listened to 88 highly imageable, common concrete nouns delivered binaurally through ear insert phones. Half of the words were four letters long. Subjects were to make a bimanual finger-life response to any four-letter word. Hits and false alarms were recorded. The xenon 133 regional cerebral blood flow (RCBF) was monitored. A left supertemporal focus of activation was positively correlated with task accuracy in the normal adult group. Poor childhood readers activated the immediately posterior temporoparietal region more. Childhood reading ability was inversely correlated with focal activation in a more posterior, temporoparietal area of cortex. Adult reading outcome was not related to this finding. Results were interpreted as suggesting a trait anomaly of left hemisphere cerebral activation in adults who were dyslexic as children.

FLYNN, JANE M.; DEERING, WILLIAM; GOLDSTEIN, MICHAEL; & RAHBAR, MOHAMMAD HOSSEIN. (1992, February). Electrophysiological correlates of dyslexic subtypes. *Journal of Learning Disabilities, 25*, 133-141.

Uses EEG amplitude to test differences by subtype of dyslexia. A sample of 39 children were included, 27 classified as dysphonetic readers, 6 as dyseidetic readers, and 6 as nondisabled readers. Verbal IQ on the WISC-R, the Classroom Reading Inventory, the WRAT-R Reading subtest, and the Boder Test of Reading-Spelling Patterns were used to screen and classify subjects. EEGs were collected while children did the following tasks: (1) listened to a story read at the instructional listening level, (2) read text silently at the frustration reading level, (3) read text orally at the frustration reading level, (4) recognized words at instructional spelling level, (5) undertook auditory analysis of orally presented words, and (6) drew a clock. EEG recordings on each child were taken during resting baselines with eyes closed and eyes open and during cognitive tasks. Differences on the oral reading task are reported. Lower amplitudes were found in both dyslexic groups compared with normal readers. Each subgroup with dyslexia differed from nondisabled readers primarily in regions of presumed

processing strength. There were left temporal differences in children with dyseidetic dyslexia and right parietal-occipital differences in children with dysphonetic dyslexia. Results are interpreted as suggesting that children with dysphonetic dyslexia rely primarily on holistic visual simultaneous processing modes for recognizing words. It is proposed that children with dyseidetic dyslexia are deficient in reading skills because they perceive sound-by-sound and do not advance to perception of words and word parts as meaningful units. Such children are felt to overrely on lower level linguistic skills.

COHEN, MORRIS; HYND, GEORGE; & HUGDAHL, KENNETH. (1992, February). Dichotic listening performance in subtypes of developmental dyslexia and a left temporal lobe brain tumor contrast group. *Brain and Language, 42*, 187-202.

Examines dichotic listening performance in three subtypes of developmental dyslexia and in children with left temporal lobe brain tumors. Subjects included 40 dyslexic children between 6 and 15 years of age who had been diagnosed into one of three dyslexic subtypes based on performance on tests of intelligence, language, visual-spatial perception/construction, and memory along with an analysis of their pattern of reading and spelling errors. The three subtypes were: (1) language disorder/dysphonetic, (2) visual-spatial/dyseidetic, and (3) mixed. Additionally, 7 children were included as a brain tumor clinical contrast group. Children listened to 30 pairs of voiced CV syllables presented by tape through earphones. Children saw one syllable on a plaque in front of them and simultaneously heard one syllable in one ear and another syllable in the other ear and were to report what they heard. Analysis of the results indicated that the performance of the clinical group was significantly different from that of the visual-spatial/dyseidetic group and also from that of the mixed group. Further, the findings supported the contention that the dyslexic population is heterogeneous, with each subgroup exhibiting a distinctive neuropsychological text profile and pattern of poor reading performance as well as a distinct pattern of performance on the dichotic listening task consistent with what would be expected based on the pattern of dysfunction shown on neuropsychological evaluation. The results did not support the contention of delayed or incomplete cerebral dominance for language as the underlying etiology in developmental dyslexia.

WISE, RICHARD; CHOLLET, FRANCOIS; HADAR, URI; FRISTON, KARL; HOFFNER, ELAINE; & FRACKOWIAK, RICHARD. (1991, August). Distribution of cortical neural networks involved in word comprehension and word retrieval. *Brain, 114*, 1803-1817.

Uses positron emission tomography (PET) to measure activity-related changes in regional cerebral blood flow in identifying the cortical neural networks participating in the processing of single words. Six normal adult males were studied. Activity-related changes in regional cerebral blood flow were measured under six conditions in one 90 minute session: two while the subjects were at rest and four while listening via tape to single word language tasks, including nonwords, noun-noun comparisons, verb-noun comparisons, and verb generations. In the latter task, subjects were to think of, without vocalization, as many verbs appropriate to a concrete noun as possible. Statistical analysis was performed to detect significant areas of change between task and rest. Findings demonstrated that categorical judgments on pairs of real words activate neural networks along both superior temporal gyri, but with an anatomical distribution no different from that when subjects listened to nonwords. During the verb generation task, the only temporal region activated was the left posterior superior temporal association cortex (Wernicke's area). While activation in other superior temporal regions, both left and right, correlated with rates of word presentation, there was no such correlation in Wernicke's area, indicating that this area is responsible for more than early acoustic processing. During verb generation there was activation also of left premotor

and prefrontal cortex. It was concluded that single word comprehension and retrieval activate different distributed regions of the cerebral cortex, with Wernicke's area the only region engaged by both processes and with participation during silent word generation of networks involved in vocalization.

## IV-2 Sex differences

PLEWIS, IAN. (1991, Summer). Pupils' progress in reading and mathematics during primary school: Associations with ethnic group and sex. *Educational Research, 33*, 133-140.

Examines whether early differences in black boys' and girls' performances in reading and mathematics were maintained over the span of a longitudinal study. The sample consisted of white and black children who had remained in London schools with a multiethnic intake through the end of junior school. Comparison of results of a variety of standardized reading and mathematics tests administered throughout the span of the study showed that girls surpassed boys in reading achievement during primary school, with rate of progress being more dramatic for black girls. Advantages for girls were attributed to benefits accumulated during infant school. The differential between black girls and black boys in reading was maintained but not broadened during junior school. In infant schools, boys made more progress in mathematics than did girls. However, girls tended to catch up during junior school with black boys falling behind.

CHIPMAN, SUSAN F.; MARSHALL, SANDRA P.; & SCOTT, PATRICIA A. (1991, Winter). Content effects on word problem performance: A possible source of test bias? *American Educational Research Journal, 28*, 897-915.

Explores the effects of sex stereotype and personal familiarity on problem-solving performance. Item banks were developed in which the same mathematic problem was manipulated to obtain four items, one very masculine, one very feminine, one neutral but familiar, and one neutral and unfamiliar. A set of 32 different tests were created, with the order of presentation randomized within each test. Problems were presented to male and female university subjects in an open-ended, show-your-work-format. In addition, subjects completed a background questionnaire, a problem familiarity rating for each problem situation, and a situation familiarity rating. They also rated the sex stereotype of each problem situation. Males performed significantly better than females over all types combined and had significantly better performance on masculine items and neutral familiar items. There was a significant coefficient of correlation between problem familiarity and problem difficulty. No effects of sex typing were found, and amount of mathematics course background did not seem to affect problem-solving performance.

HABENICHT, DONNA J.; BYOUNE, HELEN O.; & FUTCHER, W.G.A. (1990, December). Hemisphericity and reading achievement for Black and Caucasian elementary students. *Perceptual and Motor Skills, 71*, 923-931.

Compares the preferred cognitive processing mode of Black and Caucasian pupils to study whether race, sex, cognitive processing mode, and reading achievement are related. Subjects were 70 Black and 41 Caucasian fourth and fifth graders from a small rural school. Reading and vocabulary scores on the ITBS were used to assess reading achievement, and the Cognitive Laterality Battery (CLB) was used to determine cognitive processing mode. The CLB consists of eight tests designed to assess the performance of appositional (visuospatial) and propositional (verbosequential) skills. The Cognitive Laterality Quotient is determined

by obtaining the difference between the Appositional and Propositional scores. A positive score represents better performance on visuospatial skills (A-type profile), while a negative score indicates better performance on verbosequential skills (P-type profile). Chi-square analyses showed no significant differences between the proportion of Black and Caucasian pupils or boys and girls who showed A-type or P-type profiles. On the ITBS, means for fourth grade Black boys and fifth grade Black girls were below grade level, regardless of laterality type. P-type Black fourth grade girls were below grade level but A-types were at grade level on the ITBS. The pattern was even more mixed for Caucasian pupils, with P-type girls scoring at or above grade level. No statistically significant differences were noted between mean group achievement of the ITBS with regard to race, sex, and hemisphericity. The Cognitive Laterality Quotient showed no significant relation to reading achievement scores.

CORMIER, PIERRE, & STUBBERT, JEFFREY A. (1991, September). Instruction effects on gender differences in visual field advantages during lexical decision tasks. *Cortex, 27*, 453-458.

Investigates the effects of instruction emphasizing speed or accuracy on gender differences in visual field advantages (VFA) to lexical decision tasks. Subjects for Experiment 1 included 18 male and 18 female university students who were randomly assigned to one of three instruction groups. The task given was to determine whether a series of tachistoscopically presented letter strings were words. Each letter string was presented once in each visual field. Subjects were instructed to be quick, or correct, or quick and correct. RVFAS in reaction time were found for males in the accuracy and in the speed and accuracy conditions. In Experiment 2, feedback consistent with the instructions was given. Both males and females in the accuracy condition demonstrated a RVFA in the second block of trials. Findings are interpreted as suggesting that VFAS to lexical decision tasks can be modified by instructions to subjects.

## IV-3 Intellectual abilities and reading

DOLLINGER, STEPHEN J., & MCMORROW, MARY ANN. (1991, Fall). Individual differences in "reading between the lines": The Word Association Implications Test. *American Journal of Psychology, 104*, 395-411.

Explores the relation among reading comprehension ability, abstract reasoning ability, and performance on the Word Association Implication Test (WAIT). Subjects, 131 college students participating as a course requirement, were divided into good judges (n=46) and poor judges (n=85) based on performance on the WAIT, a test assessing ability to identify appropriate clues and make accurate judgments. Measures of prediction administered were the comprehension section of the NORT, the WAIS-R Similarities subtest, and a practice form of the Miller's Analogies Test. ACT scores made available on some of the subjects also were used for purposes of the study. ANOVA, ANCOVA, and stepwise multiple regression techniques applied to the data revealed that good judges significantly outperformed poor judges on the similarities task, but not on the analogies test. Good judges also surpassed poor judges of all subscales of the NDRT particularly on those associated with interpretative understanding, comprehension of purpose, and comprehension of the humanities. Comparisons of ACT scores indicated good judges were superior to poor judges on the English Usage and Social Studies Reading scales but not on the Mathematics Usage and Natural Science Reading scales.

FELTON, REBECCA H., & WOOD, FRANK B. (1992, May) A reading level match study of nonword reading skills in poor readers with varying IQ. *Journal of Learning Disabilities, 25*, 318-326.

Uses a reading level match design to evaluate the hypothesis that disabled readers are characterized by poor nonword reading skills and that a specific deficit in nonword reading can be found only in children whose reading is discrepant from intellectual ability. Four samples of children from one school district were identified: (1) 93 third grade poor readers scoring at or below the 10th percentile on word identification on the WJPER, (2) 93 first graders matched on word identification scores to the third grade poor readers, (3) 54 fifth grade poor readers scoring at or below the 5th percentile on word identification, and (4) 54 first graders matched to the fifth graders on word identification. Administered tests included the WJPER-Reading Cluster and the Decoding Skills Test (used as a measure of decoding of real words and nonwords). To evaluate the impact of level of verbal ability on phonological coding, the third grade poor reader sample was divided into 32 children above Verbal IQ 92 and 32 at or below Verbal IQ 92 who were matched on word identification scores. Both third and fifth grade groups of poor readers were impaired on nonword reading tasks in relation to their word identification match controls of nondisabled first graders. Poor readers at both grade levels were impaired in relation to their word identification match controls regardless of task difficulty. Poor readers at both IQ levels showed similar deficits in nonword reading in comparison to controls. Findings are interpreted as providing evidence for a deficit in nonword reading skills that is not explained by verbal intelligence.

STANOVICH, KEITH E., & CUNNINGHAM, ANNE E. (1992, January). Studying the consequences of literacy within a literate society: The cognitive correlates of print exposure. *Memory & Cognition, 20*, 51-68.

Exaluates several techniques for assessing differential exposure to print. Participants in the study where 300 undergraduates recruited from two introductory psychology subject pools. Subjects completed several cognitive tasks including the comprehension and vocabulary subtests of the NDRT, the RPM, the PPVT, and measures of spelling recognition, spelling production, figural analogies, verbal fluency, and history/literature knowledge. They also completed several measures of print exposure including the Author Recognition Test (ART), the Magazine Recognition test (MRT), and a reading and media habits questionnaire. Correlational analyses showed that indicators of print exposure have significant relation with measures of vocabulary, cultural knowledge, spelling ability and verbal fluency. Several indicators of print exposure predicted variance in these areas even when general ability and reading comprehension skills were partialled out.

## IV-4 Modes of learning

KOZMA, ROBERT B. (1991, Summer). Learning with media. *Review of Educational Research, 61*, 179-211.

Reviews the research literature focusing on the question of whether media influence learning. Included in the review are sections on learning with books, television, computers, and multimedia. It is felt that the media are distinguished by cognitively relevant characteristics of their technologies, symbol systems, and processing capabilities. The review examined studies that illustrated how those characteristics, and the instructional designs that employ them, interact with learner and task characteristics to influence the structure of mental representations and cognitive processes. The author contends that medium and method of learning have an integral relation. Within a given design, the medium enables and constrains

the method, while the method draws on and instantiates the capabilities of the medium. It is concluded that learning was influenced by the methods used, but in part because they took advantage of the medium's cognitively relevant capabilities to complement the learner's prior knowledge and cognitive skills.

CALVERT, SANDRA L.; WATSON, J. ALLEN; BRINKLEY, VICKIE; & PENNY, JUDY. (1990). Computer presentational features for poor readers' recall of information. *Journal of Educational Computing Research, 6*, 287-298.

Assesses the effects of action and verbal labels on children's recall of words presented on a computer monitor. Subjects were 80 children equally distributed among high and low ability reading groups in kindergarten and second grade. All subjects attended one public school in a moderately large southeastern city. After being shown a printed object word on a screen, children heard or did not hear the word being stated by a Voltrax voice synthesizer. The printed word was also presented with either a related action label (i.e. motion picture) or without action (i.e. still frame picture). The design was counterbalanced so that each object word was accompanied by all possible combinations of action and verbal labels (no action/no label, action/no label, no action/label, action/label). Following a 30 second distraction task, children were asked to name all the objects they could remember from the presentation. Free recall scores for each child were computed by summing all object words remembered within each of the 2 x 2 factorial cells of action and verbal labels. A 2 (action) x 2 (verbal label) x 2 (grade) x 2 (reading label) mixed ANOVA applied to children's recall scores indicated that second graders recalled more words than did kindergartners. Verbal labels produced no recall differences among good and poor readers at any grade level. Action labels increased word recall of poor readers in second grade to the level of good readers in the second grade. Good and poor readers in kindergarten did not display any significant differences in recall as a function of action labels. Results suggest older children with reading difficulties may benefit from a visual emphasis of action content.

ARMSTRONG, G. BLAKE; BOIARSKY, GREG A.; & MARES, MARIE-LOUISE. (1991, September). Background television and reading performance. *Communication Monographs, 58*, 235-253.

Tests the implications of a capacity model for recall of difficult written textual material in order to determine if television impairs recall performance at the point of immediate comprehension and memory or over time. Subjects were 95 university undergraduates who read an expository prose passage under quiet conditions or concurrently with two types of television content—prime time drama and commercials—and completed a cued-recall test of what they had read. Effects on immediate and delayed recall were examined. Subjects also completed a posttest questionnaire estimating their motivation and effort and describing their studying and viewing habits. Prior achievement variables served as control measures. Subjects in the control groups scored higher on the passage reading test. The main effect of TV background was significant, with scores in the quiet condition significantly higher than in the ads or drama conditions. There was no significant main effect for time of testing or program type, but there was a slight time of testing by program type interaction. Subjects in the commercials/delayed testing condition scored the lowest of all groups participating. No significant differences were found in motivation or effort between groups. Ads were seen as more distracting than drama.

RIDING, RICHARD, & MATHIAS, DAVID. (1991). Cognitive styles and preferred learning mode, reading attainment, and cognitive ability in 11-year-old children. *Educational Psychology, 11*, 383-393.

Explores the nature of two fundamental cognitive styles (the verbal-imagery style of the representation of information during thinking and the wholist-analytic mode of processing information) and their relation to aspects of school learning. The subjects were 80 British 10 and 11-year-old children in an urban primary school. They comprised all the pupils in year 6 with the exception of those in a remedial class. Measures included an assessment of cognitive styles (The Cognitive Styles Analysis), a mode of presentation preference test, a reading attainment test (Holborn Reading Scale), and a test of cognitive ability (Cognitive Abilities Test). All subjects completed all tasks. Results of testing revealed that for this sample the wholist-analytic ratio ranged from 0.618 to 1.978 with a mean of 1.179 (SD 0.293) and a median of 1.163. The verbal-imagery ratio ranged from 0.721 to 1.443 with a mean of 1.059 (SD 0.134) and median of 1.055. The correlation coefficient between the two ratios was low (r= -0.12), confirming the independence of the two dimensions; the coefficients with sex also were low (wholist-analytic 0.02, verbal-imagery 0.01). With respect to learning mode, wholists preferred the mode that corresponded to their verbal-imagery style; verbalizers chose text while imagers chose pictures. Analytics were fairly equally divided across the verbal-imagery dimension. On reading attainment and cognitive abilities, the performance of the wholists was superior to the verbalizers and declined linearly with increasing imagery style, while analytics were moderately constant across the dimension.

HARDY, BETTIE W.; MCINTYRE, CURTIS W.; BROWN, ALAN S.; & NORTH, ALVIN J. (1989, December). Visual and auditory coding confusability in students with and without learning disabilities. *Journal of Learning Disabilities, 22*, 646-651.

Compares visual and auditory coding confusability in LD boys and matched controls. Subjects were 19 boys ages 8 to 11 who were enrolled in a language training program due to LDs diagnosed by a pediatrician and by a pediatric psychologist. These were matched with 19 normally achieving boys on race, IQ, CA, and SES. During 25-minute sessions conducted on two successive days, each child was asked to tell whether successfully flashed letter pairs were the same or different. The letter pairs presented were identical (AA), visually confusable (PR), auditorily confusable (FS), or neither visually nor auditorily confusable (NT). Delay intervals of 0 or 2 seconds were used between the presentation of the first and second letters; reaction time and accuracy of response were recorded. ANOVA procedures applied to the median reaction times on identical pairs, by delay interval, for the two groups, on successive days revealed LDs responded more slowly than controls, but their general confusability patterns (visual and auditory) were similar. Additional practice resulted in comparable decision latencies for the two groups, but differences in confusability became apparent. Controls, unlike LDs, displayed the most visual confusability at 0 seconds delay and the most auditory confusability at 2 seconds delay.

BASSILI, JOHN N.; SMITH, MARILYN C.; & MACLEOD, COLIN M. (1989, August). Auditory and visual word-stem completion: Separating data-driven and conceptually driven processes. *Quarterly Journal of Experimental Psychology, 41A*, 439-453.

Investigates in two experiments the contributions of data-driven and conceptually driven processing on an implicit word-stem completion task. Undergraduates (48 and 96) served as subjects in both experiments. For Experiment 1, 24 stimulus words were divided into three sets of eight and studied either visually or auditorily; they were then tested using either visual or auditory word-stems. Greater priming was noted under same-modality conditions as compared to priming in cross-modality conditions. In the second experiment, a set of 24 sentences was prepared so that each had a general or a specific subject referent. During the study session, each subject was presented with 12 sentences with encoding task manipulated within subjects. A third of the subjects read a word under general instructions

(think of an appropriate category label for the noun in the sentence), a third read the sentence under specific instructions (think of the specific object the sentence referred to) without actually perceiving it, and the final third had no exposure to the word and provided baseline data for completion of its corresponding stem. During the test period, all subjects were given the same 48-item word-stem completion test, consisting of the stems of the 24 stimulus words and of 24 filler words. Six of the stems corresponded to nouns relevant to sentences studied under general instructions, 6 to nouns studied under specific instructions, and 12 to the subjects of sentences that had not been presented. Modality of presentation was varied between subjects. Priming was found for both actually read nouns and inferred nouns. Additionally, a modality effect was noted for the actually read nouns but not for the inferred nouns. It was concluded that the findings support the hypothesis that tests of implicit memory are sensitive to prior processing, regardless of whether the processing is data driven or conceptually driven. Further, the greatest priming was revealed by words that benefit from both types of processing, suggesting that the contribution of the two components may be additive.

LUND, RANDALL J. (1991, Summer). A comparison of second language listening and reading comprehension. *The Modern Language Journal, 75*, 196-204.

Investigates the relation between listening and reading comprehension among university students enrolled in beginning and intermediate classes in German. Sixty students from each of the first, second, and third semester German classes were randomly selected as subjects. Two versions of text were prepared, one oral and one written. Subject at each level were randomly assigned to either listening or reading versions. Listeners heard the text over headphones, while readers read the text at their own speed. Subjects then wrote a recall in English in immediate and delayed conditions. Significant main effects were found for modality, course, and trial, and significant interactions were found between modality and trial. Lexical data produced similar results with a three-way interaction among course, modality, and trial. Reading was superior to listening, more propositions were recalled in the second trial, and readers improved more than listeners on the second trial. Differences were found between course three listeners and beginners in courses one and two. Listeners seemed to rely on top-down processing and made more errors than did readers. Thus, readers had the advantage over listeners in quantity of recall, while the results in terms of quality of recall were mixed. Readers recalled more propositions, but listeners recalled a greater proportion of higher order ideas.

FUCHS, LYNN S., & MAXWELL, LINN. (1988, Spring). Interactive effects of reading mode, production format, and structural importance of text among LD pupils. *Learning Disability Quarterly, 11*, 97-105.

Assesses the effects of reading mode (oral vs. silent), production format (oral vs. written), and the structure of text on the reading comprehension of LD pupils. Subjects were 44 male LD pupils, ages 3 to 8. Controlling for subjects' ages and reading levels, pupils were randomly assigned to an oral or silent reading mode. Standard scores on the Reading Comprehension subtest of the SAT administered two weeks preceding the investigation revealed no significant differences between groups. Four 400-word traditional folktales were rewritten to ensure comparable readability levels as well as the presence of comparable proportions of four levels of idea units, reflecting relative importance to the story's theme. Two of the four passages were randomly assigned to each subject and within subject, to a production format. Pupils were assessed twice, using an oral and a written recall, with production format order and passages counterbalanced. Analyses of variance conducted on percentage of idea units recalled at four levels of thematic importance indicated a three-way

interaction. Differential performance between written and oral recall formats increased in linear fashion, with more important thematic ideas for oral but not silent reading.

## IV-5 Experiments in learning

McKeown, Margaret G.; Beck, Isabel L.; Sinatra, Gale M.; & Loxterman, Jane A. (1992). The contribution of prior knowledge and coherent text to comprehension. *Reading Research Quarterly, 27*, 78-93.

Looks at the effect of background knowledge on more and less coherent texts in the area of social studies and reports the most recent study in a series of studies on learning history from social studies textbooks. The 48 fifth grade subjects were assigned to one of two text versions: as is or revised. Background knowledge was presented through an instructional module introduced in regular social studies classes. Children read the materials silently in four text segments and told in their own words what each section was about. After recalls, pupils answered a series of open-ended questions. Pupils who read the revised text recalled a greater percentage of content units and answered more questions correctly. There were significant differences in recall and question responses across the four separate passages. Data from this study are compared to an earlier study to illustrate the differential effects of knowledge and text coherence. Children who read the revised text were able to use the knowledge gained from the background instructional module to help them focus on and remember the most significant information from the text.

Mosenthal, Peter B., & Kirsch, Irwin S. (1992, May). Using knowledge modeling as a basis for assessing students' knowledge. *Journal of Reading, 35*, 668-678.

Describes a methodology for assessing students' prior knowledge and how it affects acquisition of new knowledge from written text. In preparation for reading a text, 276 high school students were asked to write everything they knew about the topic. After reading the text, they wrote everything they could recall. Each sentence in each student's pre- and postrecall was analyzed to see if it contained any of the following features: action, agent, object, receiver, goal/explanation, effect, time, location, and condition. Information with regard to each feature was recorded on a matrix, with prerecall information highlighted in yellow, and postrecall information highlighted in green. Yellow, green, and yellow-green highlighted information on each matrix displayed the scaffolding hierarchy for each student. Analysis of various matrices indicated students with little or no prior knowledge about impeachment were at a disadvantage when reading on that topic. These students tended to develop only the simplest components of a knowledge base (i.e., action, condition, or agent). Students with more extensive prior knowledge fine tuned their prior knowledge base. Their matrices displayed acquisitions of new knowledge with reference to various, more complex features.

Nelson, Douglas L.; Bajo, Maria-Teresa; McEvoy, Cathy L.; & Schreiber, Thomas A. (1989, September). Prior knowledge: The effects of natural category size on memory for implicitly encoded concepts. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 15*, 957-967.

Designs five experiments to examine variables that normally affect memory for studied words to determine if they had similar effects on memory for the word's associates. Students enrolled in introductory psychology courses served as subjects. Memory for associates was tested by cued recall (Experiments 1-3) or by recognition (Experiments 4-5), with the number and strength of the associates varied in all experiments. Test instructions (direct-

indirect), distractor tasks, lag, and amount of practice were manipulated in the experiments. Results revealed that, provided subjects were not distracted prior to the test, the probability of recalling associates of the studied word decreased with the number of associates activated and with their strength under all conditions. The strength of the associates, but not their number, affected recognition. Variables that affected recall and recognition of studied words had parallel effects on their associates.

WOLOSHYN, VERA E.; PRESSLEY, MICHAEL; & SCHNEIDER, WOLFGANG. (1992, March). Elaborative-interrogation and prior knowledge effects on learning of facts. *Journal of Educational Psychology, 84*, 115-124.

Determines whether elaborative-interrogation or reading-to-understand conditions promote the learning of facts more efficiently. Subjects were Canadian and West German adults who were presented facts about their own provinces and states and about the other country's provinces and states. In the elaborative-interrogation condition, subjects were asked to tell why each fact was sensible, given knowledge about the area. In the reading-to-understand condition, participants read rapidly to comprehend the facts presented. All subjects then were asked to match provinces and states to the fact associated with them. A third group served as controls. Prior knowledge significantly influenced learning in both conditions. Elaborative-interrogation was superior to reading-to-understand and control comparisons. Subjects who had high prior knowledge produced better fact matches than did those with low prior knowledge. The researchers conclude that both strategies and prior knowledge play important roles in fact learning. Regression analyses suggest that optimum learning occurred when participants high in prior knowledge used the elaborative-interrogation strategy.

MCCORMICK, SANDRA, & COOPER, JOHN O. (1991, July/September). Can SQ3R facilitate secondary learning disabled students' literal comprehension of expository text? Three experiments. *Reading Psychology, 12*, 239-271.

Evaluates, in three experiments, the effects of SQ3R on secondary LD students' literal comprehension of expository text. Subjects for each experiment were nine to ten secondary level students from a state rehabilitation center for delinquent males. All subjects were classified as having reading related LDs according to state criteria. Subjects in each experiment met with instructors for 4.5 weeks (Experiments 1 and 2) or 6 weeks (Experiment 3). For all experiments, subjects were taught in baseline conditions which introduced them to difficult vocabulary, and/or required them to read passages from history texts written at the instructional level, and retell as much information as they could recall. Directed SQ3R instructional conditions always followed baseline conditions. Dependent measures for all experiments were percentage scores based on number of information units retold by students in relation to total number of information units for the passages that were read. For Experiment 1, students' responses were analyzed for 17 sessions in the context of a multiple baseline across subjects design. For experiment 2, responses were examined for 22 sessions using an alternating treatment design; and for Experiment 3, responses were analyzed over 18 sessions through a combination reversal and multiple baseline across subjects design. SQ3R instruction did not produce a substantial effect on literal comprehension. A relation was noted between passage length and percentage of retellings when retellings were assessed on immediate recall tasks after the reading of shorter passages. Readings on longer passages yielded lower percentages for retellings than did readings of shorter passages.

BJORKLUND, DAVID F., & BUCHANAN, JOHN J. (1989, December). Developmental and knowledge base differences in the acquisition and extension of a memory strategy. *Journal of Experimental Child Psychology, 48*, 451-471.

Designs two experiments to examine developmental differences in the acquisition and extension of an organizational strategy. In Experiment 1, 46 subjects, including fourth and seventh graders, received four free-recall trials on each of two categorically related lists of words. Results revealed that recall and clustering increased with age and were greater for typical than atypical words. The percentage of subjects classified as strategic was greater for the older children. In Experiment 2, 196 subjects in third, fifth, and seventh grades were trained to use an organizational strategy on either typical or atypical items, with half then receiving either typical or atypical items on a transfer list. On training trials, age-related differences were observed only in relation to the atypical lists. Generalization of the presented strategy was greater (demonstrated by recall and clustering performance and strategic classification) for subjects trained on the typical lists, with age differences in strategic classification being limited to the atypical items.

BARNETT, JERROLD E., & SEEFELDT, RICHARD W. (1989, December). Read something once, why read it again?: Repetitive reading and recall. *Journal of Reading Behavior, 21*, 351-360.

Explores the effects of rereading of text on students' recall and transfer. Seventy-two volunteers from an introductory psychology course served as subjects. On the basis of composite ACT scores, a median split was used to divide the subjects into high and low ability groups. Half of all subjects were initially instructed that they would be allowed to read the text once, and half were informed they would be reading the text twice. The text was approximately 1,000 words long and described legal principles of evidence. All subjects were tested for factual retention and for transfer. Results were analyzed by performing two separate 2 x 2 x 2 ANOVAS, one with factual scores and one with transfer scores as the dependent measure. In each analysis, ability (high, low), instructional condition (one or two readings), and reading condition (one or two readings) were between subjects factors. Results revealed that the instruction that a text could be read twice facilitated recall, even if the text was read only once. Reading a text twice increased factual retention, but on the transfer test, an interaction with ability was found. Only high ability students showed improvement with a second reading on the transfer test. Poor readers benefited only quantitatively from the opportunity to reread.

STEWART, ROGER A., & CROSS, TRACY L. (1991, September). The effect of marginal glosses on reading comprehension and retention. *Journal of Reading, 35*, 4-12.

Explores in two different studies the effect of marginal glossing on 121 college students' comprehension and retention under two different treatment conditions. Study 1 explored whether marginal glosses result in better retention of intentional and incidental passage information. Subjects completed an unannounced pretest over article contents as well as a delayed retention interval test four weeks later. Students using marginal glosses showed better initial learning of both intentional and incidental material. Higher scores were maintained on the delayed posttest for intentional learning materials. Control group test performance was more consistent over time than was experimental group performance. Study 2 determined whether marginal glosses have a differential effect on comprehension and retention when prior academic performance and success are used as grouping criteria. The course exam served as the posttest, and there was no delayed retention interval. No significant differences were found between experimental and control groups on incidental learning items, intentional learning items, or on total score when the total class was considered. However, significant differences appeared in the group with the lower GPA. For them, there was a significant difference on intentional learning items. No differences were found for the two groups with mid and higher GPAS. High GPA control subjects outperformed mid GPA control subjects on incidental learning items and total score. No significant differences were found

between scores of high and mid GPA experimental subjects, suggesting that glossing enhanced the performance of mid GPA experimental subjects to the level of the high GPA subjects.

GARNER, RUTH; ALEXANDER, PATRICIA A.; GILLINGHAM, MARK G.; KULIKOWICH, JONNA M.; & BROWN, RACHEL. (1991, Fall). Interest and learning from text. *American Educational Research Journal, 28*, 643-659.

Reports two studies investigating the effects of interesting detail (seductive detail) in texts on students' learning. Participants were undergraduate students (48 in Experiment 1 and 228 in Experiment 2) who were assigned randomly to one of four treatment conditions. Each group received a different form of text that presented the same content altered by the placement of potentially seductive detail, either embedded or included as an aside. In the first experiment, only general interestingness of text and placement of highly interesting details were manipulated. In the second study, both text interestingness and placement of detail were manipulated; in addition, subjects were pretested for domain knowledge related to the target text. In both experiments, recall of important information was tested on three measures designed by the researchers. Results of analyses indicated that attention of students was diverted from important generalizations in text to interesting, sometimes irrelevant detail. Placement of the detail did not affect recall, but overall interestingness of the text did, particularly if students knew little about the topic of the text.

DAVIS-DORSEY, JUDY; ROSS, STEVEN M.; & MORRISON, GARY R. (1991, March). The role of rewording and context personalization in the solving of mathematical word problems. *Journal of Educational Psychology, 83*, 61-68.

Tests both the impact of personalizing mathematical word problems and of rewording them for explicitness. Participants included 68 second graders and 59 fifth graders from two schools. Eight forms of a 16-item problem-solving instrument were designed for each level, each one containing four instances of four problem types: change - change unknown, change - start unknown, combine - subset unknown, and compare - difference unknown. The latter was considered the most difficult and the first type, the easiest. Personalization was accomplished by including students' names and information obtained from student biographies in the problems. ANOVA procedures were used in analyzing data. Second grade pupils performed best when personalization and rewording were used in combination. Fifth grade pupils performed better with personalization on both reworded and standard problems, but not with rewording for either context. Personalization was interpreted as making problems more motivating and easier to represent mentally in relation to existing knowledge.

HABERLANDT, KARL, & GRAESSER, ARTHUR C. (1989, October/December). Buffering new information during reading. *Discourse Processes, 12*, 479-494.

Investigates predictions of extant reading theories on buffering by studying the impact of nonboundary words on working memory load. Two subject-paced reading experiments in which word-reading times were collected using the moving-window method were reported. Subjects, 116 in Experiment 1 and 120 in Experiment 2, were undergraduate college students. Word type, the amount of information at successive locations within sentences, and task were the independent variables. Word-reading time was the dependent variable. Results revealed that reading times increased with successive locations, as indexed by the cumulative number of new arguments per sentence. There was an interaction involving word type, such that reading times of content words increased more steeply than reading times of function words. Among content words, the increase was steeper for nouns than for verbs; and among nouns, the increase was steeper for new nouns than for repeated nouns.

BREZNITZ, ZVIA, & SHARE, DAVID L. (1992, June). Effects of accelerated reading rate on memory for text. *Journal of Educational Psychology, 84*, 193-199.

Compares differences in short term memory (STM) functioning during fast-paced and self-paced reading. Subjects for all phases of the study were 23 second graders from a middle class school in Israel. Within the four experiments, subjects were administered a variety of standard STM-sensitive tasks in both fast-paced and self-paced reading conditions. The results of various analyses supported the notion that gains in reading accuracy and comprehension in fast-paced reading stem from changes in the operation of STM.

STEIN, BONNIE L., & KIRBY, JOHN R. (1992, June). The effects of text absent and text present conditions on summarization and recall of text. *Journal of Reading Behavior, 24*, 217-232.

Investigates the effects of text absent and text present summarization conditions on the nature of text processing shown during summarization and on later recall of text. Subjects were 50 sixth grade Canadian pupils from two classes in each of two schools who volunteered to participate. Reading scores on the GMRT, level D, were used in stratified random assignment to assign pupils to one of two experimental task conditions: text absent and text present. An expository text consisting of six paragraphs, each having an explicitly stated or an implicit main idea, was used for both groups. All pupils were asked to read the text twice and then to summarize it. Text present summarizers could refer to the text in writing their summary; text absent summarizers did not have the text available when they wrote their summaries. The day following the summarizing activity and again one week later, children were asked for an oral free recall of the text. Overall summary and recall content scores were analyzed for the number of propositions recalled in each of three hierarchical levels. No significant differences were found between the next day and one week later recall measure, thus the two scores were averaged. Regression analyses indicated that text absent summarization resulted in lower summary content generally, but in greater summary depth for more able readers. Summary depth resulted in increased recall in general. Summary content was associated only with recall for the text absent group; text absence alone did not result in greater recall. It was concluded that text absent summarization is beneficial only to competent summary writers or able readers.

PETROS, THOMAS V.; BENTZ, BARB; HAMMES, KATHY; & ZEHR, H. DAVID. (1990, October/December). The components of text that influence reading times and recall in skilled and less skilled college readers. *Discourse Processes, 13*, 387-400.

Examines text characteristics that affect reading time and recall in skilled and unskilled college readers. Subjects were 59 undergraduate psychology students; 28 were skilled readers and 31 were unskilled readers according to NDRT results. Subjects read two narrative and two expository passages, each displayed, idea unit by idea unit, on a computer screen. Reading time was obtained for each idea unit. Subjects were asked for an immediate oral recall of each passage. Predictor variables included: (1) the number of words in each idea unit (word decoding), (2) the logarithm of the average frequency of the content words in each idea unit (lexical access), (3) the number of new content words in each idea unit (working-memory load), (4) several factors related to the subjects' sensitivity to text structure (whether the idea unit was at the end of the sentence, the importance level and serial position of each idea unit, the passage type), and (5) the reading level of the subject. Multiple regression analyses applied to the data indicated skilled readers read at faster rates than less skilled readers. Word decoding and lexical access factors accounted for a significant portion of the reading time variance. The importance level of idea units in the text accounted for a significant portion of the recall score variance. Sensitivity to text structure was not a source of reading ability differences in reading times or recall for either text.

YUSSEN, STEVEN R.; STRIGHT, ANNE D.; GLYSCH, RANDALL L.; BONK, CURTIS E.; LU, I-CHUNG; & AL-SABATY, IBRAHIM. (1991, October). Learning and forgetting of narratives following good and poor text organization. *Contemporary Educational Psychology, 16*, 346-374.

Reports findings from three experiments examining the effects on memory of good story versus poor story form. Subjects in all three experiments were college students and numbered 64, 60, and 48, respectively. In Experiment 1, half the subjects were randomly assigned to read stories that were standard or well ordered, while the other half read the same stories with the order of propositions scrambled and some wording changes. Within each story type, half of the subjects read the story once, and half read it three times. Two different stories were used, with half of the subjects randomly assigned to one and half to the other. Each subject attempted recall of the story three times. Data collected included number of words recalled, number of propositions recalled, and the order in which propositions were recalled. The poorly ordered stories were more difficult to recall. In Experiment 2, each of the two stories was given a partially scrambled order along with the scrambled and standard conditions. Four study and recall trials were given, and a 24 hour retention recall was administered. Results supported those of the first experiment. Partially scrambled stories were found to be as difficult to recall as the completely scrambled ones. Experiment 3 added a one-week retention trial. In addition, one group was told to freely reorder what was read to make a sensible story. Findings corroborated those of the other experiments.

KIRBY, JOHN R., & PEDWELL, DENISE. (1991). Students' approaches to summarization. *Educational Psychology, 11*, 297-307.

Examines the interactive effects of the approach (deep or surface) to learning adopted by students and the task conditions (text present or text absent summarization) upon recall of text information. Subjects were 35 undergraduates enrolled in introductory psychology classes who were randomly assigned to either a text absent or a text present summarization. All subjects read two texts as though they were studying them for a class. One text was designed to be easy in structure and the other, difficult. After reading, subjects were asked to write a summary of no longer than one page. Those in the text present condition had access to the text while the others did not. Two to three days later students completed an approach to learning questionnaire to assess their deep and surface approaches to learning and wrote a written recall of the texts, prompted only by the text titles. The two types of summarization appeared to encourage different processes, and the processes differed with the texts. Deep processing was associated with greater recall in the text absent group. Best recalls were produced by surface learners in the text present condition and deep learners in the text absent condition. On the difficult text, best recalls were produced by subjects who had produced good summaries in the text absent condition. The researchers conclude that approaches to learning play a significant role in summarization.

LANGER, PHILIP; KEENAN, VERNE; & NELSON, SUSAN. (1991, July). Influence of feedback type on comprehension with two variants of a text. *Bulletin of the Psychonomic Society, 29*, 348-350.

Studies the effects of feedback on text comprehension when subjects reconstructed scrambled versions of qualitatively similar texts. One version of the text (route) was based on the sequential order of locations encountered when driving through a mythical town. A second version described the town in geographical terms. Feedback was provided in the form of tokens which could be used to determine appropriateness of sentence placement in one condition or timed access to a map of the town in the other condition. Recall of text was superior for the route version, particularly for map rather than token assistance. Discrimination between paraphrases and original sentences was not a function of either ver-

sion or feedback. Concordance between reconstructed passage sentence order and the original passage was not related to either recall or recognition. Results are contrasted with previous studies and assumptions regarding the specificity of effects for text content and feedback.

STERN, LEONARD D.; DAHLGREN, RICHARD G.; & GAFFNEY, LINDA L. (1991, November). Spacing judgments as an index of integration from context-induced relational processing: Implications for the free recall of ambiguous prose passages. *Memory & Cognition, 19*, 579-592.

Performs two experiments investigating the effect of information integration on the recall of ambiguous prose passages. Undergraduates (n = 65 and 104) served as subjects for both experiments. In Experiment 1, subjects read one of two ambiguous passages in a title, no-title, or delayed-title condition. Sentences were presented one at a time on a video monitor, with each passage presented twice. Passages were rated for comprehensibility, and subjects in the no-title and delayed-title conditions were asked to write a brief description of the passage. All subjects received a sentence distance judgment (SDJ) task in which they saw sentence pairs from the text and were to determine how many other sentences had intervened between the pair. On the SDJ test, subjects performed better when they read passages headed by a title than in the other two conditions. In Experiment 2, subjects were randomly assigned to the same three conditions as in Experiment 1 plus an individual-sentence-title condition. Passages were presented only once. In addition to the tasks required in the first experiment, subjects were asked to free-recall the sentences. Findings from both experiments led to the conclusion that the integration in memory of information from the passages was improved when context information was provided at the time the passages were given. Results indicated also that integration affected free recall of an ambiguous passage. When degree of integration of the passage's propositions was controlled, free recall was no different for subjects who did or did not know the passage's title at reading time. Inducing subjects to comprehend the sentences individually, without relating them to one another, reduced free recall.

PURNELL, KENNETH N., & SOLMAN, ROBERT T. (1991). The influence of technical illustrations on students' comprehension in geography. *Reading Research Quarterly, 26*, 277-299.

Reports a series of five experiments designed to examine the effects of illustrations on the comprehension of technical material by Australian high school students. All subjects were enrolled in high school geography classes (grade levels 9-12). In Experiment 1, the same basic geographical text was read by three groups of 25 students each; additional, related content was presented (1) as an illustration, (2) as text, or (3) as both text and illustration. The assessment measure included 20 multiple-choice items, 10 testing comprehension of facts in the text and 10 testing comprehension of the content of the illustration. Findings revealed that the presence of related content in an illustration did not improve comprehension of the basic content; however, the group that received the additional content as both text and illustration outperformed the other two groups on that content. These results were examined further in four experiments with various designs and a total of 204 students. In Experiments 2, 4, and 5, content presented in the form of both text and illustration resulted in higher comprehension than simple repetition of either the text or the illustration. In Experiments 2, 3, 4, and 5, content presented in an illustration only was comprehended better than the same content presented in text only.

TERRY, WILLIAM S., & HOWE, DANIEL C. (1988, January). Effects of incidental pictorial and verbal adjuncts on text learning. *Journal of General Psychology, 115*, 41-49.

Researches the effects on retention of supplementing prose material of famous psychologists with drawings and/or brief biographies of the same persons. Subjects were 102 undergraduates randomly assigned to one of four groups asked to read four texts under four adjunct conditions: (1) an accompanying illustration, (2) a biography, (3) both adjuncts, or (4) the text alone. A 12-item test of retention followed. In Experiment 1, students received one adjunct with each text, both adjuncts, or neither in a between-groups design. In Experiment 2, a single group of students received a within-subjects manipulation of the same adjunct conditions. Having all four texts accompanied by both adjuncts resulted in a lower score in the between-groups comparison. In the within-subjects condition, texts accompanied by an illustration were learned better, with these students performing best on text with both picture and biography.

JOORDENS, STEVE, & MERIKLE, PHILIP M. (1992, March). False recognition and perception without awareness. *Memory & Cognition, 20*, 151-159.

Examines, in three experiments, whether the phenomenon of false recognition, or calling new test words "old," is biased by context words. In each experiment, 32 paid undergraduates served as subjects. For Experiment 1, participants were assigned to one of two groups, with one group receiving short exposure of the context words and the unaware instructions, while the other group received long exposures of the context words and the aware instruction. Ninety-six words were presented to subjects at the rate of one word per second, and they were told that their memory for the words would be tested. In the test phase, subjects were to indicate whether the word was old or new. When context words were briefly exposed and subjects were not told of their presence, new words were called old more often if the context and test words were identical than if the context and test words were different. When the context words were presented at longer exposure duration and subjects were informed of their presence, the opposite pattern of results were found. The findings of Experiments 2 and 3 indicated that the exposure duration of the context words, and not the instructions, is the major factor determining which pattern of false recognition occurs.

IMAI, SATOMI, & RICHMAN, CHARLES L. (1991, September). Is the bizarreness effect a special case of sentence reorganization? *Bulletin of the Psychonomic Society, 29*, 429-432.

Compares the effects on memory of two types of bizarre sentences with that of common sentences. Two experiments are reported. In Experiment 1, 48 subjects were assigned randomly to three groups: (1) six illogical and six atypical sentences, (2) six atypical and six common sentences, and (3) six illogical and six common sentences. Subjects viewed sentences on a computer screen and were asked to rate on a 5-point scale the clearness of the image in each sentence. Following a distraction task, subjects were asked to write the nouns that had appeared in uppercase in the sentences. Advantages for memorial effects of bizarre sentences over common ones were found with atypical and common sentences only. In Experiment 2, a longer stimulus presentation time was allowed the 34 undergraduate subjects. Free recall and sentence access performance was superior for the illogical sentences as opposed to the atypical and the common sentences. Vividness ratings for common atypical and illogical sentences were not affected by time.

CARLSON, LAURA A.; ALEJANO, ANNJANETTE R.; & CARR, THOMAS H. (1991, September). The level-of-focal-attention hypothesis in oral reading: Influence of

strategies on the context specificity of lexical repetition effects. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 924-931.

Examines, in two experiments, the effects of instruction focusing readers' attention on level of processing while reading pairs of texts orally. Instructional conditions for both experiments were (1) lexical, in which instruction focused subjects' attention on word-by-word reading, and (2) text, in which instruction focused attention on reading for comprehension. Subjects for Experiment 1, 32 undergraduates enrolled in introductory psychology classes, read four pairs of passages within their assigned condition. The first pair shared all the words, with both passages being coherent. The second pair shared all the words, with the first passage being scrambled and the second being coherent. The third pair shared only closed-class function words, not content words, with both passages being coherent. The fourth pair shared only function words, with the first passage being scrambled and the second being coherent. Reading times were determined by stopwatch, and readings were taped for later error analysis. ANOVA results indicated that text level instruction resulted in improved reading time only when the first reading matched the second in coherence. Under lexical level instruction, improvement resulted from previous reading of the same coherent passage as well as from a scrambled version of that passage. Experiment 2, with 64 undergraduates as subjects, examined the effects of attentional instruction with second passages consisting only of scrambled texts. ANOVA results indicated level of focal attention did not effect improvement with scrambled targets. Results provided evidence that the linguistic structure of the target passages is important in the improvement of attentional strategies with repetition methodology.

McKoon, Gail; Ratcliff, Roger; & Seifert, Colleen. (1989, December). Making the connection; Generalized knowledge structures in story understanding. *Journal of Memory and Language, 28*, 711-734.

Conducts six experiments to investigate the connections in memory between two stories describing the same action sequence—stories based on MOPS (memory organization packets) with overlapping information. Subjects for each experiment were members of an introductory psychology course. After they read a long list of stories, subjects were presented with a list of phrases for which they were required to make old/new recognition judgments. The experiments were designed to use the amount of priming in recognition as a dependent variable, so that the results would reflect associations established in memory at the time of reading the stories, rather than associations constructed at the time of the retrieval test. Results revealed that for MOP-related target phrases, responses were facilitated by phrases of the target's own story. But for MOP-unrelated target phrases, responses were facilitated only by phrases of the same story as the target. Secondary results ruled out possible alternative interpretations of the main results. Specifically, MOP-related targets did not function as though they were synonymous, and so eliminated synonymy as an explanation of the results. Neither the results for MOP-related targets nor the results for MOP-unrelated targets depended on the targets' story having a specific phrase parallel to the priming phrase in the other story. When subjects were asked to discriminate which phrases belonged to which stories, they did so for MOP-unrelated targets, but not for MOP-related targets.

Britton, Bruce K., & Gülgöz, Sami. (1991, September). Using Kintsch's computational model to improve instructional text: Effects of repairing inference calls on recall and cognitive structures. *Journal of Educational Psychology, 83*, 329-345.

Reports two experiments designed to test a computational model for improving instructional text. Initially, the model was used to identify locations where inferences were called for in a 1000-word expository text taken from *U.S. Air Power: Key to Deterrence*. Then each location was repaired to produce a principled revision intended to make the learn-

er's task easier. In Experiment 1, with 170 undergraduate college students, free recall of the principled revision was increased over that of the original version. In addition, more inference questions were answered correctly and efficiency of learning was significantly higher for those reading the revision. Performance on a factual multiple-choice test and reading rates did not differ between text versions. Experiment 2 compared the shape of readers' mental representations against the shape of the intended mental representation provided by the author of the original text and the mental representations suggested by seven subject-matter experts. Subjects were 125 U.S. Air Force recruits in basic training. To assess the shape of the mental representations, the researchers identified 12 important terms about the text and constructed all possible pairs of them, 66 in all. Participants read one version of the text and rated each pair for relatedness on a 7-point scale. Results revealed that the author's and experts' cognitive structure shapes correlated above .5 with the shapes provided by the recruits who read the principled revision but only .1 with recruits who read the original version. The principled revision appeared to convey the author's intentions better than had the author's original text.

GOOLKASIAN, PAULA; VAN WALLENDAEL, LORI R.; & TERRY, W. SCOTT. (1991, October). Recognition memory for easy and difficult text. *Journal of General Psychology, 118*, 375-393.

Explores, in three studies, the ways readers store easy and difficult text in memory. Subjects in studies 1, 2 and 3 were 103 undergraduate psychology students, 22 faculty members, and 141 undergraduate psychology students, respectively. In all three studies, subjects were asked to read from easier and harder texts and to respond to a sentence recognition task using a 5-point confidence scale to indicate how sure they were of having read the exact sentence in given texts. Recognition task items for the three studies included sentences that were verbatim, paraphrases, or inferences from the material which had been read. Recognition tasks were administered in a 5 minute delay format and a 1 hour delay format for study 1, but only in a 5 minute delay format for studies 2 and 3. Results of unequal-n ANOVAs performed on the data for the three studies were consistent. Recognition scores for item types varied as a function of stimulus difficulty, with easier passages yielding higher recognition rates for verbatim and surface memory items than harder passages.

WOLMAN, CLARA. (1991, Summer). Sensitivity to causal cohesion in stories by children with mild mental retardation, children with learning disabilities, and children without disabilities. *Journal of Special Education, 25*, 135-154.

Compares children with mild disabilities and children without disabilities on their sensitivity to causal structure in stories. Subjects were fourth, fifth, and sixth grade children from six schools in Minnesota. The sample was composed of 16 children with mild retardation, 29 LD children, and 37 children who were good readers. Children read two stories: one manipulated to obtain cohesion, and the other to obtain lack of cohesion according to a theory describing the causal structure of stories and their internal representations as networks of interrelated statements. After reading each story, children were asked to rate the importance of three statements in each story they had read: one within an episode in the story, one before the episode, and one after it. Results of repeated measures ANOVAs revealed children with mild disabilities recalled less than children without disabilities. The cohesive story was better recalled than the noncohesive story by all groups. Statements occurring in the causal chain were better recalled and rated important than statements not in the causal chain. Better recall was achieved for statements having more rather than fewer causal connections.

BENSON, PHILIPPA Jane. (1991, Winter). Leading-edge research or lost cause? The search for interscriptual Stroop effects. *Visible Language, 25*, 4-17.

Reviews studies conducted during the past decade on cross-orthographic Stroop interference tests to describe how Stroop studies explore cognitive mechanisms involved in reading and the possibility that these mechanisms might be constrained by language orthography. Conceptual and methodological flaws in the research are suggested. Studies reviewed suggest that readers of different orthographies use different cognitive processes in reading.

NELSON, DOUGLAS L.; MCEVOY, CATHY L.; & SCHREIBER, THOMAS A. (1990, January). Encoding context and retrieval conditions as determinants of the effects of natural category size. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 31-41.

Uses four experiments to manipulate the number of associates activated by words studied in the presence of unrelated context words, meaningfully related context words, or in the absence of modifying context words. Subjects, ranging from 60 to 128 in number, were drawn from courses in introductory psychology. Memory was tested by either cued or free recall. Results showed that the number of directly activated associates either facilitated, had no effect, or disrupted recall for studied words. The direction and magnitude of the effects of number of activated associates was shown to be determined by the encoding/retrieval context.

## IV-6 Visual perception

HEALY, ALICE F., & CUNNINGHAM, THOMAS F. (1992, March). A developmental evaluation of the role of word shape in word recognition. *Memory & Cognition, 20*, 141-150.

Investigates the role of word shape in word recognition in two experiments. Experiment 1 employed 48 fourth graders and 72 seventh graders, divided evenly into three reading-level groups based on scores on the DRP. Each subject was given two versions of one of two passages, one in all uppercase letters and one in a standard version with test words in lowercase. The two passages differed only in that each contained a different set of 40 test words that were misspelled. Words were misspelled by deleting one of four letters: *s*, *c*, *k*, or *p*. Two versions of a 41-word spelling test were created also. Each of the misspelled test words in the corresponding passage was included both spelled correctly and misspelled with the critical letter deleted. Children within each ability group were randomly assigned to one of the two passages and one of the two sequences in which the two versions were to be read. Subjects were asked to circle the misspelled words and then to take a 9-item multiple-choice comprehension test. The spelling test was given within two weeks of the original test session. Proofreading errors decreased with age and with reading ability. Subjects missed more words with deletions of *s* or *c* than *k* or *p* in the lowercase passage but not in the uppercase passage. Experiment 2 was the same as the first experiment except that 40 college students were used as subjects. Results were essentially similar to those in Experiment 1. It is argued that the findings point to the use of word shape as an important variable in recognizing familiar words.

BOROWSKY, RON, & BESNER, DEREK. (1991, March). Visual word recognition across orthographies: On the interaction between context and degradation. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 272-276.

Investigates the interaction between context and stimulus degradation in semantic priming with two different baselines. Subjects were 64 college undergraduates who were paid for participating. Critical stimuli consisted of 80 related word pairs, with the first word

always the prime and always in clearly visible lowercase letters. The second word was the target and was presented in lowercase letters that were degraded on half of the trials. Half of the subjects participated in an unrelated-word baseline condition; the other half participated in a baseline condition with 40 related word pairs and 40 asterisk word pairs. Words were presented via computer on a monitor; subjects were to determine whether the target was a word or a nonword. Reaction times (RTs) and error frequencies were analyzed using ANOVA procedures. RT data indicated that the condition in which the asterisk primes were used as baseline did not give the same pattern of overadditivity between context and degradation that was apparent when unrelated-word primes were used. Implications for models of word recognition are discussed.

BALUCH, BAHMAN, & SHAHIDI, SHAHRIAR. (1991, June). Visual word recognition in beginning readers of Persian. *Perceptual and Motor Skills, 72*, 1327-1331.

Asks how beginning readers of Persian visually recognize words. Sixty Persian words were selected from first and second grade texts. Half of the words were termed transparent or written with vowel letters, while the other half were opaque or written with no vowels specified. Words were presented in typed script one at a time to ten children of Persian origin, ages 7 to 11. Transparent words were read more accurately than opaque words.

BRYDEN, M.P.; MONDOR, T. ALEXANDRE; LOKEN, MARTIN; INGLETON, MARGARET A.; & BERGSTROM, KATHY. (1990, September). Locus of information in words and the right visual field effect. *Brain and Cognition, 14*, 44-58.

Presents three experiments investigating the locus of information in words by deleting either the initial or ending one or two letters. Subjects in all experiments were undergraduate students and numbered 405 for the first and 16 for each of the other two. In the first experiment, four lists of English nouns were prepared such that within each list one-fourth of the words had the initial letter deleted, one-fourth had the initial two letters deleted, one-fourth had the terminal letter deleted, and one-fourth had the terminal two letters deleted. Words were four, five, and six letters in length. Within each word length group, frequency was crossed with imageability (high frequency/high imageability, high frequency/low imageability, low frequency/high imageability, and low frequency/low imageability). Subjects were to generate the word that best fit the blanks. Subjects more frequently identified words with terminal deletions than with initial deletions. Accuracy was better with one letter deletions than with two letter deletions and was greater for longer words than for shorter ones. High frequency words were generated more often than low frequency words. In general, it was found that words have more information in the initial letters. The two final experiments assessed the effect of locus of information on visual laterality. The generally observed right visual field superiority was not found. It was concluded that the distribution of information is not usually a major confounding variable in laterality studies employing horizontally presented words.

## IV-7 Reading and language abilities

HALL, WILLIAM S.; WHITE, THOMAS G.; & GUTHRIE, LARRY. (1986). Skilled reading and language development: Some key issues. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 89-111). Hillsdale, NJ: Erlbaum.

Identifies and reviews research in the nature of skilled reading at the word and sentence level and its relation to language development. Two major categories are reviewed:

word recognition and semantic processing. Under the latter category, research is cited under word knowledge, speed of processing, use of semantic information, and syntactic processing. Key issues in the areas are presented.

NYSTRAND, MARTIN. (1990). Sharing words: The effects of readers on developing writers. *Written Communication, 7*, 3-24.

Contrasts social constructionist and social interactionist approaches to the problems of discourse and reviews recent social interactionist studies concerning the effects of readers on writers' development. Investigations of word segmentation skills, peer conferencing, and instructional discourse are included.

ABRAHAM, ELYSE. (1991). Why "because"? The management of given/new information as a constraint on the selection of causal alternatives. *Text, 11*, 323-339.

Determines whether the use of "because" and "because of" are subject to constraints imposed by either topical information management or given/new information management, or whether their occurrence is possibly random. Examined were discourse materials representing three genres: biography, mystery fiction, and learned/scientific writing. Total occurrences of "because" and "because of" were tabulated for each source, with 86% of the 445 occurrences found to be "because" clauses. Learned/scientific writing showed the smallest disparity of the three genres in use between the two, with 66% "because" clauses and 34% "because of" phrases. Data were then analyzed for evidence of two possible constraints: the management of topical information and the management of given/new information. The analysis revealed that the selection of "because" or "because of" is not constrained by topic management; however, usage was constrained by given/new information management.

KNUDSON, RUTH E. (1991, Spring). Effects of writing experience, grade, and reading level on children's narrative writing. *Journal of Research and Development in Education, 24*, 45-52.

Investigates the effects of four kinds of writing treatments over time on children's narrative writing. The writing experiences included (1) writing in response to a description of a picture, (2) writing in response to a picture, (3) writing in response to a story starter, and (4) writing in response to an open-ended prompt (free writing). Two hundred twenty-one pupils from 14 classrooms, representing grades 3, 4, and 5 were randomly assigned to treatment groups within grades and provided with opportunities to write for 20 minutes daily for 14 days. Two writing samples were collected, one immediately after the study (day 15) and one two weeks later (day 25). For both samples children wrote in response to a common writing prompt, different from any of the four involved in the study. Writing samples were scored holistically by two raters on a 6-point scale, resolving differences by discussion. Results of a repeated measures ANOVA indicated main effects for grade level and reading level, with older students and above-average readers writing significantly better than younger students and below-average readers. There was also a significant main effect for time. Pupils improved with practice in a given writing experience to a certain point (i.e., from day 1 to day 7 and then did not significantly improve thereafter. Although all improved in writing during the course of the study, the results from the first writing sample (day 15) were no better than those of day 1, indicating that children do not write better on prompts that are different from those used in their practice.

STAHLE, DEBRA L. (1991, July/September). Are there explicit anaphoric correlates between children's writing and reading? *Reading Psychology, 12*, 219-237.

Explores the relation between children's comprehension of cohesive ties in reading and their use of them in narrative writing. Subjects were 115 second, fourth, and sixth graders attending a self contained traditional schedule elementary school. Children were asked to produce two writing samples (one free topic and one assigned topic narrative). They also were asked to complete one practice cloze passage and two test passages created from material that was unfamiliar to them. The first passage was written at one-half grade level below pupils' assigned grade level, and the other was at their grade level. Cloze reading scores were computed on the basis of exact deletion replacements, with homonym spellings being accepted as correct and incomplete spellings scored as incorrect. Writing samples yielded scores for average sentence length, anaphoric density (average number of anaphora per sentence), as well as total writing (sum of anaphora used across all writing categories.) Coefficients of correlation displayed the relation between reading and writing with regard to the frequency and use of cohesive ties. The longer children's writing samples tended to be, the more observable was their use of explicit anaphora. Significant differences between all grade levels on various outcome measures supported the notion that the reading-writing connection is developmental.

VELLUTINO, FRANK R.; SCANLON, DONNA M.; SMALL, SHEILA G.; & TANZMAN, MELINDA S. (1991). The linguistic bases of reading ability: Converting written to oral language. *Text, 11*, 99-132.

Compares the performance of suburban New York children judged to be severely impaired, moderately impaired, average, and good readers on a large battery of psychometric and experimental tests administered at younger (grades 2 and 3) and older (grades 6 and 7) levels. All subjects were evaluated for cognitive and linguistic abilities, world knowledge, and specific skills believed to be important prerequisites for successful acquisition of reading skills. Stepwise regression analyses were undertaken to evaluate determinants of performance on tests of reading comprehension, listening comprehension, word identification, and pseudoword identification. Subject groups with different levels of achievement in oral reading were also compared on all measures. Results suggest that reading and listening comprehension recruit essentially the same cognitive and linguistic abilities and knowledge source. However, reading comprehension in children with limited skill in oral reading was found to depend primarily on facility in word identification, while comprehension in more advanced readers was found to depend primarily on higher level cognitive and oral language abilities. The data also suggest that facility in both word identification and text comprehension are determined by many of the same basic oral language abilities, but given processes are weighted differently in each enterprise. For example, facility in word identification appears to depend more on phonologically based skills than on semantically based skills, while facility in text comprehension appears to depend more on semantically based skills than on phonologically based skills.

HICKS, DEBORAH. (1990, March). Narrative skills and genre knowledge: Ways of telling in the primary school grades. *Applied Psycholinguistics, 11*, 83-104.

Investigates the abilities of primary school children to draw on their repertoire of narrative skills in the service of language tasks. The sample included 20 kindergartners, 20 first graders, and 18 second graders who attended a private school. Children within each grade level were individually shown a silent film and then asked to perform three narrative tasks: (1) produce an on-line narration of a 3-minute segment from the film, (2) recount the film's events as a news report, and (3) recount the film's events as an embellished story. The narrative texts produced for each task were subjected to analyses of linguistic markers of genre differences. These included the length of texts, temporal and causal connections between narrative clauses, and evaluative and highlighting markers. The findings revealed

only subtle distinctions between the narrative texts produced for the three genre tasks. Children across grade levels tended to produce sequential lists of events for the three narrative tasks. Differences found in children's texts within grade levels were primarily due to differential patterns of response to the sequential presentation of tasks.

UCHIDA, NOBUKO. (1989, April). The development of literacy. *The Science of Reading, 33*, 10-24.

Investigates whether oral composition skills help the development of reading and writing skills and whether the acquisition of written composition skills affects the quality of oral composition. Included were 64 kindergartners in Japan, divided into two groups matched for sex, WISC-R scores, and the Reading Ability Test. One group was administered the reading and composition tests in May; the other, in February. Pupils in the February group were further divided into two groups matched on the same variables, and tested in June and in September in the first year of elementary school. Measures administered included an oral reading and copying of a poem, an oral written composition of a story with two order conditions (from oral to written composition, and from written to oral composition), and an expository composition (putting the events in three pictures in sequence). Findings suggested that written compositions were influenced by pupils' writing abilities independent of the two order conditions. As pupils acquired the ability to script Hirgana characters without external verbal aids, they developed independent written composition skills. Interviews with children indicated that they gradually became aware of the functional value of literacy. A parent survey found that parents thought it better to leave literacy education to their child's spontaneity during the kindergarten years.

SPOELDERS, MARC, & VAN DAMME, LUT. (1989). Psychoeducational language awareness assessment and early reading. In Elisabetta Zuanelli Sonino, (Ed.), *Literacy in school and society; Multidisciplinary perspectives* (pp. 135-145). New York: Plenum Press.

Studies the relation between metalinguistic awareness and success in learning to read in a sample of Dutch kindergartners. Three reading achievement scores and the score on a self-developed metalinguistic awareness scale were collected on 100 children. Reading achievement scores included school marks for reading and Likert-type scale score, both given by the classroom teacher, and a score from a standardized achievement test. Correlation coefficients ranged from .51 to .60 between reading scores and total language awareness score. A shortened and revised version of the language awareness test is described. The new form is being used in a longitudinal study in progress.

BROWN, DAVID L., & BRIGGS, L.D. (1991, December). Becoming literate: The acquisition of story discourse. *Reading Horizons, 32*, 139-153.

Compares 20 kindergartners' ability to include specific story elements in their oral, dictated, and written stories. Children ranged in ages from 5.1 to 6.0; all were enrolled in a university laboratory school. Over a 5-week period, the children were asked individually to tell a story, dictate a story, and write and reread a story. Transcriptions were analyzed to identify the use of six elements: (1) classic story versions; (2) connected events; (3) fantasy experiences; (4) goal-directed experiences; (5) personal experiences; and (6) social interactions. Chi-square analyses were used to determine differences between story elements by story mode, between percentages of story elements by modes, between three-mode averages, and between six-element averages. Dictated stories had the largest average percentage of the six story elements (61%), followed by written (50%) and oral (45%) stories. Of the six elements, "connected events" occurred most often in the children's stories, with a three-mode average of 73%. Written stories demonstrated the largest percentages for "goal direct-

ed experiences'' and "connected events." Across story modes, "the personal experiences" element was produced significantly more often in the dictated mode. Within a single element and across story modes, the "classical version'' story element was produced significantly more often in the dictated mode. In addition, older children (ages 5.7 and above) composed stories that were longer and more complex, increased in use of "fantasy experiences,'' and produced stories that contained plots and characters ranging from simple to complex.

HARRINGTON, MICHAEL, & SAWYER, MARK. (1992, March). L2 working memory capacity and L2 reading skills. *Studies in Second Language Acquisition, 14*, 25-38.

Tests the extent to which differences in second language (L2) reading skill can be related to differences in L2 working memory capacity. Japanese students enrolled in an Intensive English Program were given a battery of memory tests consisting of simple random digit spans, random words spans, and the Daneman and Carpenter reading span test in both English and Japanese. The L2 memory span scores were correlated with measures of L2 reading skill for individual subjects. All subjects had a minimum 503 score on the TOEFL, and, of the 34 subjects, 33 were male. Subjects were tested in a language lab in groups of 10 to 12. Digit and word span tests were presented auditorially, while subjects read the reading span test from index cards. Means for first language (L1) Japanese digit and L1 Japanese word spans were significantly higher than L2 scores. There were no significant differences between L1 and L2 English reading span measures. L2 English digit span and word span measures did not correlate significantly with TOEFL scores or with cloze scores. L2 English reading span measure showed a significant coefficient with L2 reading span and TOEFL Grammar and TOEFL Reading. L2 English digit span and word span coefficients of correlation with TOEFL were significantly lower than the coefficient between L2 reading span and TOEFL Reading. Performance on the L2 simple span measures appeared to have little relation to L2 reading skills. Disparity between simple span and reading span measures may reflect differences between listening and reading comprehension skills across the two languages.

CARRELL, PATRICIA L., & CONNOR, ULLA. (1991, Autumn). Reading and writing descriptive and persuasive texts. *Modern Language Journal, 75*, 314-324.

Examines reading-writing relations of intermediate level second language learners in both persuasive and descriptive texts. Participants were 23 undergraduate and 10 graduate students enrolled in an English as a Second Language Program (ESL). Materials included a descriptive and a persuasive passage revised to make them comparable in length, lexical difficulty, and sentence complexity (T-units). Eight multiple-choice questions followed each passage; written recalls were collected also. In addition, two writing tasks were developed, one designed to elicit a persuasive essay and the other, a descriptive one. Writing tasks were administered prior to the reading tasks. Reading recall protocols were scored for idea units. Compositions were scored first on the TWE holistic 6-point scale, and then an analysis was done for (1) quality of description in the descriptive essays and (2) for strength of the argument in the persuasive essays. Analysis of results indicated that reading in either genre as determined by free recalls is related to writing in the genre as measured by holistic scales (r = .45 with descriptive reading and .48 with persuasive reading). In the persuasive genre only, multiple choice question scores were correlated significantly with holistic writing; no other measures comparing the two groups reached significance. It is noted that most previous research in this area has used only a single measure of reading and a single measure of writing. The findings of this study suggest that when multiple and different measures of the two skills are used, the relations between the two areas may vary. In addition, the results indicated complex interactions of genre and language proficiency, particularly in reading.

SCARBOROUGH, HOLLIS S. (1990, December). Very early language deficits in dyslexic children. *Child Development, 61*, 1728-1743.

Studies language development in children later diagnosed as dyslexic. Subjects included three groups of 30-month-old children. Twenty children were from dyslexic families and subsequently became disabled readers; 12 children were from dyslexic families and became normal readers; and 20 other normal children resembled the dyslexic group closely in IQ, SES, and gender. The Reading Cluster of the WJPB and the WISC-R were administered to 66 subjects at the end of second grade. An additional 12 subjects were evaluated using scores on standardized reading tests and scholastic aptitude. Of 34 children in the original sample who came from dyslexic families, 65% developed reading problems; all but two of the other 44 children became normal readers. At age 30 months, children who later developed reading disabilities were deficient in the length, syntactic complexity, and pronunciation accuracy of their verbal language, but not in lexical or speech discrimination skills. By age 3, these children had started to demonstrate deficits in receptive vocabulary and object naming abilities. At age 5, they showed weaknesses in object-naming, phonemic awareness, and letter-sound knowledge. Language deficits of dyslexics were unrelated to maternal reading ability and were not observed in children from dyslexic families who became normal readers.

SNYDER, LYNN S., & DOWNEY, DORIS M. (1991, February). The language-reading relationship in normal and reading-disabled children. *Journal of Speech and Hearing Research, 34*, 129-140.

Compares the word retrieval, phonological awareness, sentence completion, and narrative discourse processing skills of 93 RD and 93 normally achieving (NA) subjects from 8 to 14 years of age. The subjects were matched for age, sex, and neighborhood. Standardized tests included the WISC-R, subtests from the PIAT, the Reading subtest from the MAT, and the Producing Names on Confrontation subtest from the Clinical Evaluation of Language Function. In addition, subjects were administered three experimental measures of oral language, including a measure of phonological awareness or "pig latin" task, a sentence completion task, and a narrative discourse processing task. Results of application of MANCOVA with intelligence covaried revealed statistically significant main effects for age and group. Results of univariate analyses revealed significant differences between the RD and NA groups for single word decoding, as well as for silent reading comprehension. The IQ scores of the RD group fell within the normal range, but were significantly lower than the IQ scores of NA children. Stepwise multiple regression revealed that the variance in the younger RD children's reading comprehension scores was best accounted for by their performance on the sentence completion and word retrieval measures; the inferencing skills of the older RD children best accounted for the variance in their reading comprehension. By contrast, the younger NA children's reading comprehension scores were best accounted for by their sentence completion, the proportion of the stories they retold, and word retrieval scores. The proportion of stories retold and the phonological awareness score of the older NA children best accounted for the variance in their reading scores. Findings suggest that the oral language skills of normally achieving and reading disabled children may relate differently to their reading comprehension at different age levels.

SAWYER, DIANE J. (1992, February). Language abilities, reading acquisition, and developmental dyslexia: A discussion of hypothetical and observed relationships. *Journal of Learning Disabilities, 25*, 82-95.

Discusses a longitudinal study of reading acquisition that explored dependency relations between language abilities and reading abilities measured over the span of the study. Subjects were children in two consecutive cohorts (n=129 and 171 respectively on school

entrance) who were followed from the beginning of kindergarten to the end of third grade. Data gathered included all readiness, intelligence, and achievement tests routinely administered within the school system between the beginning of kindergarten and the end of Grade 3, as well as tests of ability to segment units of language administered at the beginning and end of kindergarten and first grade. Path analysis procedures applied to the data supported a model rooted in the notion that language processing abilities necessary for reading acquisition are not separate but build on one another in predictable fashion. Various dependency relations noted in the path analysis study are discussed in terms of a three-phase model of reading acquisition as well as insights they provide into the problems of developmental dyslexia.

LAUGHTON, JOAN, & MORRIS, NANCY T. (1989, Summer). Story grammar knowledge of learning disabled students. *Learning Disabilities Research, 4*, 87-95.

Explores whether LD and non-LD (NLD) pupils differ in their inclusion of basic story grammar components in written narratives. All participants (n=192) were enrolled in two public school systems serving a rural and small city area in Louisiana. Included were 96 LD pupils in grades 3 to 6 (24 at each grade level). They all received resource room services and attended regular classes. They were identified by teachers as being capable of writing at the sentence level. The 96 NLD subjects, in grades 3 to 6, were functioning within the average range in academic achievement. All subjects wrote one story for analysis after viewing a filmstrip. Stories were analyzed by two independent raters and interrater reliabilities were established (96% agreement for NLD stories, 95% for LD samples). Dependent variables were indicators of success or failure in use of the story grammar categories in the written narratives. MANOVA was conducted to determine whether group differences across grade levels were indicated. Results revealed significant differences at Grades 3, 4, and 5, with the LD group demonstrating poorer performance. No significant differences were found at grade 6.

JOHN, KIRK R., & RATTAN, GURMAL. (1991, Winter). A comparison of short-term memory tests as predictors of reading achievement for learning-disabled and educable mentally retarded students. *Journal of School Psychology, 29*, 309-318.

Compares nine measures of short term memory (STM) on their ability to predict reading achievement of LD and EMR pupils. Subjects were 48 LD and 34 EMR children ages 6 to 12 years. STM tests administered to the subjects included Bead Memory, Memory for Sentences, and Memory for Objects from the Stanford-Binet Intelligence Scale (fourth edition); Word Sequences, Object Sequences, and Letter Sequences from the Detroit Test of Learning Aptitude-2; Hand Movements and Word Order from the Kaufman Assessment Battery for Children (K-ABC); and Digit Span from the WISC-R. Reading was assessed with the Reading/Understanding subtest of the K-ABC. Stepwise regression analyses showed that not all STM tasks were significant predictors of reading achievement. The sentence memory task was the best predictor of reading achievement for LD students. The Letter Sequences task was the best predictor of reading achievement for the EMR students. Factor Analysis showed that a language factor (auditory/verbal) and a nonverbal factor (visual/spatial) were crucial to performance on the STM measures.

ADAMS, CATHERINE. (1990, August). Syntactic comprehension in children with expressive language impairment. *British Journal of Disorders of Communication, 25*, 149-171.

Investigates the relation between expressive language impairment (ELI) and comprehension skills of young children. Twenty-one children ages 4 to 6 were diagnosed as either exhibiting persistent ELI (including syntactic development) or developmental dyspraxic (DD), or as normal (control group). Children were assessed on a set of test sentences designed to

tap syntactic comprehension. ANOVA indicated that, for total scores, the experimental groups (ELI and DD) combined performed significantly worse than controls on the syntactic comprehension test. ELI subjects performed significantly worse than controls; however, DD students did not perform significantly differently from controls. ELI language-disordered children had significantly poorer comprehension than control subjects on sentences with embedded phrases, embedded clauses, and passives. Double object and simple reversible sentences did not discriminate the two groups. Results indicated that children with apparently isolated defects of expressive syntax do, in fact, have subtle deficits of comprehension in comparison with age-matched controls. The deficit can be detected in a syntactic decoding task. Comprehension strategies used by the ELI group are examined.

## IV-8 Vocabulary and word identification

BONTRAGER, TERRY. (1991, April/June). The development of word frequency lists prior to the 1944 Thorndike-Lorge list. *Reading Psychology, 12*, 91-116.

Examines word frequency studies that preceded the 1944 Lorge-Thorndike count. In the first part of the article, the development of the word counts preceding the Thorndike-Lorge work is discussed, followed by a description of the research, some of the problems, and some of the findings. The final section examines the reasons for the interest in word frequency lists in the early part of this century. Word count studies showed the highly repetitious nature of language. In one 1923 study, 69 words accounted for over 50% of the 100,000 tokens, while 732 words accounted for more than 75% of the total. Oral language usage studies revealed that oral language was even more repetitious than written language. Educational researchers were interested particularly in finding how many words were being taught and how many should be taught in spelling, reading, and writing classes.

NAGY, WILLIAM; ANDERSON, RICHARD C.; SCHOMMER, MARLENE; SCOTT, JUDITH ANN; & STALLMAN, ANNE C. (1989, Summer). Morphological families in the internal lexicon. *Reading Research Quarterly, 24*, 262-282.

Explores whether the speed with which a word is recognized depends on the frequency of related words and which types of related words have such an influence. Subjects, 95 undergraduates, were asked to distinguish stem words from nonwords in a lexical decision task. The stem words were matched for length and individual frequency, but differed substantially in the frequency of their inflectional, derivational, or nonmorphological relatives. The complete stimulus set consisted of the 168 target words, 168 nonwords, and 24 practice items. Nonwords conformed to the constraints of English spelling. The dependent variables included the proportion of errors and the reaction time for a correct response on the lexical decision task. Results confirmed that the frequency of inflectionally and derivationally related words significantly affected speed and accuracy of recognition of stems. However, these effects were conditioned by the likely age of acquisition for each word and by the part of speech. Extensive analyses showed that simple letter overlap did not have a significant effect on word recognition. The results supported the concept of morphologically based word families.

KRASHEN, STEPHEN. (1989, Winter). We acquire vocabulary and spelling by reading: Additional evidence for the Input Hypothesis. *Modern Language Journal, 73*, 440-464.

Reviews studies of the acquisition of vocabulary and spelling ability and suggests that the research supports the Input Hypothesis proposed for language acquisition in general.

Accordingly, it was suggested that competence in spelling and vocabulary is most efficiently attained by comprehensive input in the form of reading. This view was contrasted with the theories and research related to two competing hypotheses: the Skill-Building Hypothesis and the Output Hypothesis. Instructional implications of the Input Hypothesis also were detailed.

McDaniel, Mark A., & Pressley, Michael. (1989, June). Keyword and context instruction of new vocabulary meanings: Effects on text comprehension and memory. *Journal of Educational Psychology, 81*, 204-213.

Assesses the effects of teaching new vocabulary meanings by one of three methods (keyword, semantic context, or no strategy control) on text comprehension and memory. Two experiments were conducted and included students enrolled in introductory psychology courses at two universities (n=75 and 72, respectively). Subjects were randomly assigned to learning conditions in approximately equal numbers. For Experiment 1, meanings of new vocabulary (45 Old English words) were taught by one of the three methods, and ease of comprehending passages containing the new terms was determined by reading time and performance on a true-false comprehension test. Comprehension was assessed for two kinds of texts: embellished text, which provided contextual clues of targeted vocabulary items, and unembellished text, from which contextual clues were removed. Experiment 2 applied the same training conditions, but posttesting was modified. Subjects were required to free recall the story that was read for comprehension and then complete a cued recall test that was focused on portions of the story with new vocabulary. Statistical analyses of results revealed that reading times did not differ as a function of the method of instruction, nor did one acquisition condition consistently elicit better performance than the others across text comprehension/memory measures. The one significant difference in comprehension favored the keyword method. The usual superiority of the keyword method for recall of definitions was replicated. A subsidiary finding was that test text embellishments increased comprehension, a result suggesting that certain kinds of contextual support can enhance comprehension of new vocabulary.

Baluch, Bahman, & Besner, Derek. (1991, July). Visual word recognition: Evidence for strategic control of lexical and nonlexical routines in oral reading. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 644-652.

Uses Persian script to assess the influences of semantic relatedness and word frequency on speeded naming of phonologically transparent words (words in which vowels are specified) and phonologically opaque words (words in which vowels are not specified) when such words are presented in related or unrelated contexts. Subjects for Experiment 1 were 34 students and professors at the University of Waterloo. Transparent and opaque target words ranging in frequency, as well as transparent nonwords, were each paired with a related or unrelated stimulus word. Computerized presentation of each stimulus was followed by presentation of its target and speeded naming of the target was recorded. Mean reaction times for correct responses and error rates for each subject were computed. A 2-way ANOVA with stimulus type (opaque or transparent) and context (related or unrelated) as factors revealed that opaque words, but not transparent words, are sensitive to both word frequency or semantic relatedness manipulations. These results suggested that, in certain circumstances, consistent sound spelling correspondences in script can have significant effects on word recognition speed during oral reading. Follow-up experiments with subject samples, materials, and procedures similar to those used in Experiment 1 revealed that semantic relatedness and word frequency affect recognition speed of phonologically transparent and opaque words when nonwords are removed from experimental and practice lists.

Transparent words yield a word frequency effect when nonwords are absent from the context; but the effect of word frequency disappears when nonwords become part of the stimulus set. The results of various experiments are used to support a "flexible multiple route" model of word recognition.

SHAPIRO, LEWIS P., & JENSEN, LISE R. (1986, July). Processing open and closed class-headed nonwords: Left hemisphere support for separate vocabularies. *Brain and Language, 28*, 318-327.

Investigates whether presentation of the right visual field (RVF) involving the word recognition process results in distinctions between open and closed class words and nonwords. Subjects were 16 adults. Stimuli consisted of 48 words and 48 nonwords, with the latter set made up of equal members of initial closed class portions, open class portions, and complete nonwords. Stimuli were presented on a CRT, and subjects were to indicate by pressing a key whether a stimulus was a word or a nonword. For RVF presentations, reactions times for open class nonwords were significantly slower than those for the closed class and complete nonwords. For LVF presentations, reaction times for open nonwords were not significantly different from those for closed nonwords and complete nonwords. No significant differences were found for reaction times between closed and complete nonwords with either field of presentation.

TREIMAN, REBECCA; GOSWAMI, USHA; & BRUCK, MAGGIE. (1990, November). Not all nonwords are alike: Implications for reading development and theory. *Memory and Cognition, 18*, 559-567.

Examines, in three experiments, children's and adults' pronunciation of consonant-vowel-consonant (CVC) nonwords. Subjects for the three experiments were 29 first graders from a United States public school, 15 good and 15 poor reading third graders from a Canadian public school, and 15 English speaking adults from McGill University. Subjects in each experiment were asked to read two types of nonwords—those containing common VC units and those containing less common VC units. ANOVA, correlation, and multiple regression techniques indicated all groups performed better on nonwords containing common VC units than on nonwords containing less common VC units. All readers appeared to use VC units in the pronunciation of words. There was no evidence that CV units were not used.

WHITLOW, J.W., JR., (1990, September). Differential sensitivity of perceptual identification for words and pseudowords to test expectations: Implications for the locus of word frequency effects. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 837-851.

Reports four experiments that examined how subjects' expectations about the kind of memory test they will receive influence repetition effects in perceptual identification. Subjects were undergraduate students numbering 30, 24, 10, and 14, respectively, in the four experiments. Subjects studied words or pseudowords presented from one to six times in a list, then were asked to perform perceptual identification tests of studied and nonstudied items. Better identification of studied than of nonstudied items resulted for words and nonwords, but for words the function relating enhancement to the amount of prior exposure or repetition depended on whether subjects expected a recall test later. Findings are interpreted as supporting dual-process accounts of word identification that assume a flexible use of either lexical code activation or episodic trace retrieval.

LOVETT, MAUREEN W.; WARREN-CHAPLIN, PATRICIA, M.; RANSBY, MARILYN J.; & BORDEN, SUSAN L. (1990, December). Training the word recognition skills of read-

ing disabled children: Treatment and transfer effects. *Journal of Educational Psychology, 82,* 769-780.

Assesses the learning and transfer effects of two word recognition and spelling programs and a problem solving and study skills program used with children with reading disabilities. Subjects were 54 children who had been referred to the Reading Disabilities Research Program in Toronto. Selected children received average scores on both the verbal and nonverbal portions of the WISC-R and scored below the 25th percentile on four out of five different tests administered in a screening battery. One training program taught unknown and regular exception words by a whole word method alone; the other taught regular words by a whole word method, and exception words by a letter sound/blending method. A problem solving and skills program was taught to children in the control group. Each program was administered in 35 sessions, with instruction and practice for each treatment being equated for time. Pre- and posttests of treatment and transfer effects included measures of word recognition accuracy, word recognition latencies for correct responses, and spelling accuracy. ANOVA results showed both word recognition groups similarly affected in making significant gains in word recognition accuracy, speed, and spelling. The whole word group excelled over the letter sound/blending group on some transfer measures. Significant transfer was noted on noninstructed spelling content, but not on uninstructed reading vocabulary.

SPAAI, GERARD W.G.; ELLERMAN, HENK H.; & REITSMA, PIETER. (1991, March/April). Effects of segmented and whole-word sound feedback on learning to read single words. *Journal of Educational Research, 84,* 204-213.

Conducts two experiments to examine two alternatives (whole word vs. segmented feedback) to assisting beginning readers with word reading errors. In the whole word condition, the complete word was provided when a reading error was made or when the pupils did not read the word within the established time limit. In the segmented feedback condition, the correct word sounds were produced phoneme-by-phoneme when a reading error or an omission occurred. All words were selected from a current, first grade reading program and were presented in isolation on a computer screen. The computer was also used to provide the corrective sound feedback. Learning effects, as measured by differences in reading times and the number of errors made in the pretest and posttest, were compared with a control condition in which children received no feedback. The two experiments differed in terms of subjects (first graders with nine months vs. four months of reading experience) and the rate of presenting phonemes (segmented feedback condition). In total, 126 first grade children (60 for Experiment 1 and 66 for Experiment 2) were selected from normal, Dutch primary schools and tested individually. The results of both experiments showed a consistent, significant learning effect for the whole-word conditions with regard to reading accuracy. More words were learned in the whole-word condition. In the first experiment, it was determined that more was learned in the segmented feedback than in the control condition.

BYRNE, BRIAN, & CARROLL, MARIE. (1989, May). Learning artificial orthographies: Further evidence of a nonanalytic acquisition procedure. *Memory & Cognition, 17,* 311-317.

Explores evidence of a nonanalytic acquisition procedure resulting from three experiments conducted with volunteer university students. In Experiment 1 subjects were presented with a set of complex symbols standing for phonemes. This artificial orthography was acquired in nonanalytic fashion, and there was no demonstrable savings in learning a consistent orthography over an inconsistent orthography. In Experiment 2 some subjects were instructed to find the rule embodied in the orthography. None did, and acquisition rates were no different from those of uninstructed subjects. Experiment 3 offered subjects extended exposure to the orthography (4 hours) under systematic and arbitrary mappings, but found

no evidence of enhanced or speedier performance. Results of this series of experiments were considered indicative of nonanalytic acquisition.

TILL, ROBERT E.; MROSS, ERNEST F.; & KINTSCH, WALTER. (1988, July). Time course of priming for associate and inference words in a discourse context. *Memory and Cognition, 16*, 283-298.

Sets up a series of three experiments designed to explore the time course of word identification and meaning elaboration in discourse. Subjects numbered 48, 102, and 35 undergraduates, respectively, in the three experiments. In Experiment 1, participants read brief texts presented one word at a time. Each text contained a homograph in which the meaning was unambiguously specified by the context. Text presentation was interrupted immediately after the homograph with a lexical decision trial. Five kinds of target items were presented: (1) nonword targets, (2) contextually appropriate associates of the prime, (3) contextually inappropriate associates, (4) appropriate inference words (high-probability inferences from the text), and (5) inference control words (appropriate inferences for other texts). Stimulus onset asynchrony (SOA) between the onset of the prime and the onset of the target was 333 msec (short) or 1,000 msec (long). Subjects were randomly assigned to one of the two SOA conditions and were asked to read the stories and be prepared to answer questions about them, as well as to perform a lexical decision task. Experiment 2 was the same in design and materials as the first experiment, but there were six prime-target SOA conditions. Additionally, paragraph order was treated as a design variable, with half of the subjects seeing the paragraphs in forward order and half in reverse order. Experiment 3 was similar to the others except that there were only two prime-target SOA conditions (200 and 300 msec), and only one paragraph order was given. Materials were also altered so that for every point at which an inference target word appeared, an unused associate word was substituted. For associates of the prime word, lexical decisions that related to either the appropriate or the inappropriate sense of the ambiguous word were generally facilitated at short prime-target SOAs. At longer SOAs, responses were faster to appropriate than to inappropriate associates. For the thematic inferences, there was no difference between appropriate inferences and inappropriate control words at short SOAs. At long SOAs inference words were facilitated. Results are interpreted as providing support for the activation-selection-elaboration model of word identification and meaning construction in discourse context.

MONSELL, S.; DOYLE, M.C.; & HAGGARD, P.N. (1989, March). Effects of frequency on visual word recognition tasks: Where are they? *Journal of Experimental Psychology: General, 118*, 43-71.

Reports a series of four experiments comparing the effect of frequency of lexical decision time (LDT) with that on reaction time (RT) in four other tasks for the same words and subjects. Participants in the first two experiments were 24 adults who were paid; participants in Experiments 3 and 4 were 24 students at Cambridge University. Subjects were presented, on a monitor, with eight blocks of lexical decision trials and five blocks of categorization trials. Words included 72 nouns denoting persons and 72 nouns denoting inanimate things; nonwords were 72 orthographic and phonological legal items, matched in number of letters and syllables to the words. The findings yielded an effect on semantic categorization RT (person vs. thing) similar in size and form to the effect on LDT. Experiment 2 showed a substantial effect for syntactic categorization (noun vs. adjective), although weaker than the effect on LDT. The findings of Experiment 3 revealed that the effect on naming RT for stress-final disyllabic words was identical to that on LDT, while the effect for stress-initial words was weaker. No effect of frequency on delayed naming RT was found in Experiment 4. The data are interpreted as supporting the assumption that lexical identification is a major locus

of frequency effects, but that effects at that locus may be masked or diluted by other processes.

LUPKER, STEPHEN J., & WILLIAMS, BONNIE A. (1989, November). Rhyme priming of pictures and words: A lexical activation account. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 15*, 1033-1046.

Seeks support for the spreading activation process within lexical memory by conducting a series of four experiments involving the manipulations of prime and target type (word or picture) and prime and target task (naming or categorization). Each study involved university students who were native English speakers. Results revealed that named primes facilitated processing in all target tasks involving lexical access (word and picture naming and word categorization), independent of prime type. Categorized primes showed a Prime Type X Relatedness interaction with word primes which activate lexical memory, producing much more facilitation than picture primes. Increased depth of processing of a word prime decreased the size of the priming effects. In general, support for the lexical activation explanation was identified.

MASTERSON, JACQUELINE; LAXON, VERONICA; & STUART, MORAG. (1992, February). Beginning reading with phonology. *British Journal of Psychology, 83*, 1-12.

Analyzes the processes used for reading aloud and for printed-word comprehension by children in their second year of reading instruction. Subjects were 44 children from the second year infants' classes of two suburban schools north of London. Their RA, derived from the British Ability Single-Word Reading Test, ranged from 5.0 to 9.0. The instructional program involved the reading of real storybooks with a great deal of adult accompaniment; there was little emphasis on formal phonics instruction. Participants were presented with two tasks. Task 1 involved reading aloud 39 pairs of regular and irregular words; Task 2, consisting of 38 regularly spelled homophones, involved stating a definition or using the word in a sentence before reading it aloud. Words were categorized by frequency (low, medium, high) using Carroll, Davies, & Richman norms. Responses were recorded and transcribed for analysis. A 2-way ANOVA with repeated measures on both factors (word type and word frequency) revealed that children were able to read aloud correctly more regular than irregular words. Analysis of the significant interaction between word frequency and regularity found in Task 1 revealed that the use of assembled phonology was reserved for unfamiliar words. There was a strong relation between reading ability and proficiency in the use of assembled phonology, as shown by the proportion of the children's reading errors that occurred with irregular words.

GOSWAMI, USHA, & MEAD, FELICITY. (1992). Onset and rime awareness and analogies in reading. *Reading Research Quarterly, 27*, 152-162.

Hypothesizes that children's performance on phonological tasks based on onset-rime division is related to the ability to make analogies between spelling patterns of words. Included as subjects were 44 children, 6 to 7 years old. A series of pretests were administered to assess initial reading knowledge and vocabulary. Included among the pretests were the Schonell Single Word Reading Test, the Neale Prose Reading Test, the British Picture Vocabulary Scales, a test of letter sound and letter name knowledge, a test of nonsense word reading, and an arithmetic test. Subjects were asked to do two different analogy tasks: (1) clue word analogies, ends and (2) clue word analogies, beginnings. A series of phonological awareness tasks also were administered, including Rhyme and Alliteration, the oddity task; Segmentation, syllabic; Segmentation, deletion of the initial or final consonant; and Segmentation, phonemic. Onset-rime awareness measures were significantly related to end

analogies even when reading ability and nonsense word reading were controlled. Beginning analogies were related to higher level phonological skills. The authors concluded that the awareness of onset-rime units is connected to the ability to make connections between sequences of letters that reflect rimes.

HURFORD, DAVID P.; GILLILAND, CATHY; & GINAVAN, STEVEN. (1992, January). Examination of the intrasyllable phonemic discrimination deficit in children with reading disabilities. *Contemporary Educational Psychology, 17*, 83-88.

Investigates the intrasyllable processing deficit hypothesis by examining the ability of disabled readers to process phonemic information within syllables. A total of 26 pupils at each of grades 2, 3, and 4 participated; half were identified as disabled readers with reading scores below the 35th percentile on the MAT. Children were asked to discriminate between syllables that were vowels and CV syllables that began with liquid and plosive consonants. ANOVA procedures were used to analyze the results. RD children performed significantly less well than nondisabled readers. It was found that vowels were easier to discriminate than consonants for both groups. Performance on the syllables beginning with liquid and plosive consonants was similar. RD children in grades 2 and 3 exhibited almost identical performance for the syllables with liquid or plosive consonants.

## IV-9 Factors in interpretation

MANY, JOYCE E. (1992, February). Living through literacy experiences versus literacy analysis. Examining stance in children's response to literature. *Reading Horizons, 32*, 169-183.

Analyzes the effect of grade level on the stances fourth, sixth, and eighth grade pupils take when responding to realistic short stories and investigates the qualitative differences in responses written from different stances. Subjects (n = 43, 47, and 40 at grades 4, 6, and 8, respectively) read each story and responded to an open-ended probe about the stories read. Responses were analyzed to determine if they were primarily efferent, had no primary focus, or were primarily aesthetic. Responses were then scored using a clustering technique for similarities. No significant main effects were found for grade, but main effects were found for text, indicating that text significantly affected the degree to which students assumed efferent or aesthetic stances. Children assumed similar stances across the three passages, regardless of grade level. Cluster analysis revealed qualitative differences in the content and complexity of the responses written from each stance.

COX, CAROLE, & MANY, JOYCE E. (1992, January/March). Stance toward a literary work: Applying the transactional theory to children's responses. *Reading Psychology, 13*, 37-72.

Examines and compares fifth graders' responses to literature and film in terms of stance taken, level of personal understanding, and the relation between the two. Subjects included 38 fifth graders in two classes, all reading at or above grade level as determined by scores on the CAT. Children read four novels and viewed five films, presented biweekly, followed by an open ended prompt asking them to write a response to each. Classification systems were devised to characterize stance on a 5-point continuum from efferent to aesthetic, and the level of personal understanding reached on a 4-point scale. Findings indicated (1) between-text differences for stance and understanding, (2) film and book differences for stance but not for understanding, (3) majority of responses written from an aesthetic stance—went beyond the literal level, and (4) aesthetic stance was associated with signifi-

cantly higher levels of understanding. Pupils tended to read books more aesthetically than they viewed films.

DANIELSON, KATHY EVERTS. (1992, June). Literature groups and literature logs: Responding to literature in a community of readers. *Reading Horizons, 32*, 372-382.

Examines questions and comments written by children in literature logs during ongoing reading of a chapter book. Subjects were 22 fifth graders from a small midwestern city. As pupils read a currently popular children's novel, they were asked to write one question and one comment after each chapter for use in a later literature discussion group. Analysis of responses revealed seven types of questions and comments: (1) predictions, (2) text-related, (3) character involvement, (4) personal experiences, (5) language, (6) author, and (7) personal feelings. Responses in the literature logs gave structure to literature discussion groups and enabled children to participate meaningfully in their community of readers.

CUMMINS, DENISE DELLAROSA. (1991, September). Children's interpretations of arithmetic word problems. *Cognition and Instruction, 8*, 261-289.

Explores children's interpretations of standard arithmetic word problems and the factors that influence their interpretations in two experiments. Experiment 1 involved children solving four standard word problems and then 24 hours later drawing and selecting pictures that represented the problems' structures. Subjects were 24 first grade children, who were tested in pairs. Solution accuracy varied systematically with drawing accuracy, with children drawing correct interpretations outperforming those who drew incorrect ones. Most errors were wrong operation errors or given number errors or confusions over the words "altogether" and "each." In Experiment 2, solution and drawing accuracy were improved when problems were reworded to avoid the ambiguous linguistic forms causing the children difficulty. Subjects were 11 children who had been chosen from Experiment 1 because of difficulties with certain kinds of problems. Solution accuracy nearly tripled with the changes in the wording to remove the ambiguities.

ROGERS, THERESA. (1991, December). Students as literary critics: The interpretive experiences, beliefs, and processes of ninth-grade students. *Journal of Reading Behavior, 23*, 391-423.

Studies the beliefs, processes, and instructional experiences of eight ninth grade students studying literature in their English classes. Subjects were enrolled in a university affiliated high school and were randomly sampled from a pool of volunteers. Students were interviewed before and after a researcher-led instructional unit and were asked about how they interpreted stories, how they were taught to interpret stories, how they would teach others to interpret stories, and how students and teachers helped them to interpret stories. They also completed think-alouds while reading stories, and ranked critical paragraphs about the materials read, stating their preferences and their justifications for their preferences. They participated in a unit for approximately three weeks wherein the researcher tried to get the students to play a larger role in literary interpretive processes, both orally and in writing. At the end of the unit, all students completed a questionnaire asking the same questions asked preinstructionally. Students reasoned about literary works at an interpretive level. Their inferences were largely text based, focusing on characters and events, direct reflections of the instruction they received. After participating in the unit, students were more intertextual and more interpretive in their reasoning about literary works. Profiles are included for four individual students.

FINCHER-KIEFER, REBECCA. (1992, February). The role of prior knowledge in inferential processing. *Journal of Research in Reading, 15*, 2-27.

Assesses, in two experiments, the influence of prior knowledge on inference generation during text comprehension. Inferences observed were local inferences (those maintaining referential coherence) and global inferences (those representing probable consequences). Subjects for both experiments were college students who had participated in a screening procedure that rated their degree of prior knowledge as low (LK), intermediate (IK), or high (HK). There were 60 subjects distributed over the knowledge groups in Experiment 1, and 30 in Experiment 2. Subjects in Experiment 1 read a text containing 20 sentence pairs that cued local inferences, and 20 sentence sequences that cued global inferences. Dependent measures were reading time for sentence types and a sentence completion task that measured ability to generate both types of inferences during reading. Results indicated the degree that prior knowledge influences processing of sentences involved in global inferences but not the processing of sentences involved in local inferences. HK and IK subjects spent more time reading sentences that elicited global inferences, and less time reading explicit statements of global inferences. HKs outperformed IKs, and IKs outperformed LKs on the sentence completion statements, with explicit statements of local inferences being completed more often than explicit statements of global inferences. Results of Experiment 2 verified the finding that individuals with prior knowledge use their knowledge to generate global inferences during reading.

TIAN, GOH SOO. (1990, December). The effects of rhetorical organization in expository prose on ESL readers in Singapore. *RELC Journal, 21*, 1-13.

Reports research designed to study the effects of several rhetorical organizations in expository prose on the comprehension of ESL readers. Participants included 80 subjects at each of three educational and language proficiency levels in Singapore: secondary school, college, and postgraduate. Within each sample were subjects whose home language was Chinese, Malay, or Tamil. Subjects were assigned randomly to one of four texts, all dealing with a common topic but each written with a different discourse structure: description, causation, problem/solution, and comparison. Subjects were to read and then write a recall of the text immediately following reading and one week later. Recall protocols were scored for idea units and rhetorical organization used. ANOVA procedures were used in analyzing data. Language was not a significant factor in recall. Differential effects on recall were found for the four types of organization. Subjects who recognized and used the rhetorical organization of the original texts recalled more idea units than did others.

BADZINSKI, DIANE M. (1989, Fall). Message intensity and cognitive representations of discourse: Effects on inferential processing. *Human Communication Research, 16*, 3-32.

Conducts two experiments examining the influence of message intensity on inferential processing. Passages of high intensity are characterized by emotionalism and extremity. In Experiment 1, 32 undergraduates were randomly assigned to read five stories of either high or low intensity; both types were designed to invite identical inferences. After reading the stories, subjects were asked to participate in semantic integration, recognition, and free-recall tasks. Across all stories, one character described an event and a consequence of that event to another character. Characters' descriptions varied only in intensity as indicated by the verbs used. The semantic integration task consisted of eight yes/no questions, four premise and four inference; both types were divided into true or false questions. Premise questions were divided into whether the information was considered essential or nonessential for making inferences; inference questions were divided into physical or psychological inferences. Generally, recognition and recall data supported the hypothesis of a higher prob-

ability of inference making with passages of high intensity as opposed to passages of low intensity. Experiment 2 was a replication of the first experiment but with 30 kindergartners, 30 second graders, and 25 fourth graders as subjects. Children were administered the PPVT-R, the Columbia Mental Maturity Scale, and the general knowledge and picture arrangement subtasks of the WISC-R. Both experiments pointed to the finding that intensity affected the probability of inference construction. Speed of activating implicit text material did not differ as a function of the intensity manipulation. No clear cut age-related differences were noted in children's ability to make inferences, although there was some evidence that fourth graders were more sensitive to the manipulations than were kindergartners.

## IV-10 Oral reading

BREZNITZ, ZVIA. (1991, Summer). Anxiety and reading comprehension: A longitudinal study of Israeli pupils. *Reading Improvement, 28*, 89-95.

Investigates the relation between social and emotional variables and oral and silent reading comprehension, testing the hypothesis that oral reading is affected more by anxiety than is silent reading. One hundred and thirty-eight Israeli elementary students, 68 boys and 70 girls, were tested in first and fourth grades on parallel forms of a standardized reading comprehension test available in Hebrew. In addition, both Spielberger's State and Trait Anxiety Test and a sociometric questionnaire were administered to all subjects. The oral and silent reading comprehension passages were presented on a personal computer. Results indicated significant correlation coefficients between anxiety and oral and silent reading comprehension. Subjects in first grade who had the higher anxiety scores were the poorer readers, as evidenced by lower reading comprehension scores, a greater number of oral reading errors, and longer reading times. Oral reading performance was found to have been affected by anxiety to a greater degree than was silent reading. Subjects who performed better on oral reading measures were more accepted by their classmates. Subjects who performed better in silent reading comprehension had high trait anxiety scores and were less accepted. At fourth grade, subjects for whom silent reading comprehension was superior were more anxious. Significant direct correlations also were found for oral reading errors, reading time, and anxiety. When anxiety increased, oral reading errors and time increased. The researchers argue that social and emotional factors are more intrusive during the public performance required in oral reading.

BREZNITZ, ZVIA. (1990, April). Vocalization and pauses in fast-paced reading. *Journal of General Psychology, 117*, 153-159.

Examines the temporal patterning of pauses and vocalizations during fast-paced reading of beginning readers. Subjects were 76 first graders from a private, urban, middle class school in the United States. In individualized settings, subjects orally read three parallel forms of the Israeli Comprehension Test for Grades 1 and 2: the first at a self-paced rate, the second at a fast-paced rate, and the third at a self-paced rate. Rates of reading for each subject were controlled by presenting test passages on a computer, with the fast-paced passage being shown at a 20% faster rate than the first and third passages. Test forms were presented to subjects in a fully counterbalanced design. All readings were audiotaped for later analysis. Pause time, vocalization time, pause frequency, and average length of pauses and vocalizations were measured via an automatic vocal transaction analyzer. A repeated measures two-way ANOVA conducted on each measure revealed that children could read significantly faster than their normal reading rate. When prompted to read at a faster rate, children made fewer and shorter pauses, vocalized at a faster pace, and spoke in longer units. Speech patterns associated with fast-paced reading were significantly correlated with reading com-

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prehension, even when readers read at their own pace, and may be used as indicators of effective reading.

NICHOLSON, TOM. (1991, December). Do children read words better in context or in lists? A classic study revisited. *Journal of Educational Psychology, 83*, 444-450.

Replicates a 1965 study which found that children made 60% to 80% fewer errors when reading words in context as compared with words on an isolated list. In Experiment 1, 32 6-year-olds, 34 7-year-olds, and 34 8-year-olds, balanced among good, average, and poor readers, read passages in context first and then read the same material in list form, a reversal of the order of presentation in the original experiment. Experiment 2 was a straight replication of the original investigation in which 97 children read the list first, then the context. Error scores were compared in terms of raw score differences and percentage gain. Scores were analyzed separately for each reading level within each age group. Results showed that the poor readers and the 6- and 7-year-old average readers showed statistically reliable context gains in both experiments. However, the 6-year-old good readers and the 8-year-old average readers only gained reliably with context in the second experiment. The 7-year-old good readers did not gain reliably with context in either experiment. The 8-year-old good readers made no reliable context gains in the second experiment, but gained reliably with the list in the first experiment. It was concluded that the classic study gave an overly optimistic impression of the benefits of context, especially with regard to good readers.

IMAI, MUTSUMI; ANDERSON, RICHARD C.; WILKINSON, IAN A.G.; & YI HWAJIN. (1992, June). Properties of attention during reading lessons. *Journal of Educational Psychology, 84*, 160-173.

Studies factors that determine selective attention during reading instruction. Specifically, the influence of students' reading level, group membership, and oral reading error behavior on attention was evaluated. Subjects were 116 children distributed over three second grade and three third grade classrooms in three schools. According to normal conditions, students in each classroom were assigned to one of three groups. Within each group, students participated in four lessons involving progressively harder reading materials. During each lesson, students were directed to take turns reading aloud pages of an assigned story. The group was then led through a discussion according to a brief lesson guide provided by the researchers. Videotapes of each reading lesson were analyzed to determine the moment to moment state of attention/inattention of each child in the group during his/her oral reading turn as well as during the group discussion. Durations of attention/inattention states were recorded for each child in conjunction with data pertaining to the individual characteristics, group characteristics, and text characteristics. Oral reading errors also were recorded from the videotapes along with teacher feedback data on each error. In addition all children were administered five reliable measures of reading comprehension and fluency. A variety of statistical procedures, including event history analyses, life tables analyses, and MANOVA produced a number of findings. Among these was that for all groups, at all grade levels, attention declines substantially over the first 15 seconds of an attention episode and then levels off. Third graders were less likely to experience lapses of attention than were second graders and girls experienced fewer lapses of attention than boys. Lapses in attention increased as story difficulty increased, particularly with regard to younger and less able students. Oral reading errors were generally followed by lapses in attention at both grade levels. Finally, for individual children, reading group membership was more strongly associated with attention than were various reliable measures of comprehension and fluency.

FLEISHER, BARBARA M. (1990). Analysis of cue strategies of disabled readers. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 153-162). Provo, UT: College Reading Association.

Compares the cue strategies of two kinds of poor readers, poor decoders and poor comprehenders, to determine whether subsets of poor readers can be differentiated by the way they use textual cues as they read. Fourth grade children attending a college reading clinic were assigned to one of two groups based on their primary diagnosed needs: poor decoders (n=20) or poor comprehenders (n=27). Pupils were audiotaped while reading aloud a story that gradually increased in difficulty. Low, moderate, and high levels of difficulty were identified by the frequency and types of errors made by each reader within 100 consecutive words. Results suggest that priorities for graphic and semantic information were different depending on the nature of the reading disability and the degree of difficulty experienced. Both groups focused on semantic information when experiencing low difficulty levels but, as the reading became more difficult, cue strategies appeared to be different for the two groups. Poor decoders appeared to maintain attention to both meaning and graphic information, while poor comprehenders continued to seek out graphic cues, losing sight of much of the meaning.

PAPPAS, CHRISTINE C. (1991, April/June). Young children's strategies in learning the "book language" of information books. *Discourse Processes, 14*, 203-225.

Describes distinctive discourse features of information books as compared with the linguistic features of "typical storybooks" written for young children, and then examines four kindergartners' repeated "pretend reading" of three typical information books to determine the kinds of strategies children employ in approximating the discourse patterns of information books. The researcher argues that an information book "means" or encodes different purposes and in different ways than do story books. Aspects of the lexicogrammatical features of typical information books include coclassification chains(as distinguished from a storybook's particularized character or object and its specific referents, information books address a general class of objects or animals), use of present tense verbs, and the predominance of use of attributive, identifying, and possessive processes. The children's readings of information text were then examined for the strategies they employed in three repeated text approximations. Each of the children was read a particular book and then asked to read it "in your own way." Analyses of the retellings were based on the identified textual patterns of information books. Although individual children were not always consistent in their use of the textual properties, they all showed an increasing sensitivity to them across their pretend readings. Illustrations influenced and supported children's readings, especially in their earlier reenactments. The children employed similar strategies of "placeholder" for technical terminology, substitution of similar grammatical construction, and overapplication of certain linguistic devices.

WALLACE, CATHERINE. (1989, Spring). Learning to read in a second language: A window on the language acquisition process. *Reading in a Foreign Language, 5*, 277-298.

Investigates the oral reading miscues of one second language learner to determine what they revealed about the process of second language acquisition. The subject was a 19-year-old Pakistani woman newly learning both English and literacy in a predominantly one-on-one instructional situation with the researcher. Texts read included selections chosen by the subject from a variety of books made available to her, as well as some second language experience work composed in small group situations. Recordings were made of nearly all reading and conversation sessions between the subject and the researcher over a 17-month period. Selected for analysis were 11 hour-long sessions recorded at monthly intervals over

a period of a year. Of specific interest were three textual features that, in the subject's oral readings, elicited (1) no attempt or hesitation, (2) miscue/miscues, or (3) comments related to the features. The features studied were the *-ed* as tense morpheme and the personal pronouns *they* and *you*. Early observations of the subject's oral reading errors clearly reflected her interlanguage and indicated she was reading for meaning. Varying kinds of learner responses over the span of the study suggested a gradual development in the subject's concept of the text features being examined. The one-on-one reading event enabled the instructor to help the subject develop reading strategies and gain insight into her current second language development. The reading event enabled the subject to learn about the nature of her own developing language.

## IV-11 Rate of reading

CARVER, RONALD P. (1990). *Reading rate: A review of research and theory*. San Diego, CA: Academic.

Reviews 100 years of research and theory relevant to reading rate. The book is divided into five major parts. Part 1, consisting of two chapters, contains an overview of the research presented and reviewed in later chapters as well as the theoretical foundation for comprehending the remaining chapters. Topics addressed in various other chapters include eye movements, silent speech, scanning and skimming, rauding, learning, and memorizing, flexibility, word recognition and cognitive speed, oral reading, comprehension, and rapid reading training. The fifth section ends with a summary of the author's findings. Research indicates that good readers in general do not modify their rate with the difficulty level of the material. Silent speech appears to be inherent in normal reading and is not harmful. Studies from eye movements suggest that normal reading involves looking at almost every word. Growth in reading rate appears to be relatively constant from year to year from grades 2 to 12. Other information is presented and discussed.

CARVER, RONALD P. (1992, June). The three factors in reading ability: Reanalysis of a study by Cunningham, Stanovich, and Wilson. *Journal of Reading Behavior, 24*, 173-190.

Reanalyzes data collected by others to determine if it provides support for three reading ability factors in rauding theory: rauding accuracy level ($A_L$), rauding rate level ($R_L$), and rauding efficiency level ($E_L$). The data consisted of 22 measures administered to 76 introductory psychology students. Factor analyses conducted by the researchers led to the conclusion that three factors accounted for individual differences in reading ability, with one factor being word recognition. In the reanalysis, traditional factor analysis techniques applied to the nine reading ability measures indicated one factor to be $A_L$ (because it loaded highest on vocabulary and listening) and a second to be $R_L$ (because it loaded highest on reading rate). A second analysis forcing a one-factor fit on the data indicated the factor to be $E_L$ (because it loaded highest on general reading measures such as reading comprehension and efficiency). It is concluded that the word recognition factor advanced previously is a facet of $R_L$, and that $A_L$ and $R_L$ are correlated subfactors of general reading ability, or $E_L$, both of which account for individual differences on most measures of reading ability.

KNUPFER, NANCY NELSON, & MCISSAC, MARINA STOCK. (1989, Winter). Desktop publishing: The effects of computerized formats on reading speed and comprehension. *Journal of Research on Computing in Education, 22*, 127-136.

Studies the effects of two desktop publishing features, run-around and wrap-around text, on students' reading speed and comprehension. Ninety university students from an introductory computer literacy course participated in the study. Four sets of reading materials with identical content were administered. The text of the reading materials was varied by format: run-around, wrap-around, and single or double column. To assess students' comprehension of the reading material, pre- and posttests were developed by the researchers. Dependent measures included reading speed and gain in comprehension as determined by the difference between the pre- and posttest scores. Data were analyzed using ANOVA procedures. Results indicated a significantly faster reading speed and better comprehension for wrap-around text than for run-around text. There was no significant difference for column format.

MCKAY, MICHAEL, & NEALE, MARIE. (1991, February). Reading strategies of very young fluent readers. *Australian Journal of Reading, 14*, 29-39.

Compares reading rates with context and without context for young precocious readers and normal readers in an attempt to investigate the use of "lower order" and "higher order" cuing systems used by precocious readers. Five preschool children, whose ages ranged from 3 years to 4.6 and, who could read at least first grade material, were compared with a matched control group of school-aged students. All children read a grade one equivalent 100-word passage from the NARA-Revised, two second grade passages derived from the same test, and two scrambled lists of 50 words each derived from the passages. Young fluent readers (YFRS) had faster median times (when rate was calculated as seconds per word unit) for reading both connected passages and related word lists at both levels of difficulty. A Wilcoxon matched pairs signed-rank test indicated that YFRS read the easier prose and list significantly faster than the more difficult prose and list. The control group did not differ significantly in their median word/unit times for reading the first passage and lists, but a significant difference did occur ($p<.05$) between their median times to read the more difficult passage and list. A Mann-Whitney U-Test reached significance only for the time taken to read the difficult passage: In general, as the level of difficulty of the reading material increased, the advantage in median word/unit reaction time displayed by the YFRS also increased over the control group. The percentage of errors made by the control group compared with the YFRS also increased as the stimuli increased in difficulty. The researchers suggest that higher level cues (syntactic and semantic) were used more effectively by the YFRS than by the controls.

## IV-12 Other factors related to reading

MAYLOR, E.A.; RABBITT, P.M.A.; JAMES, G.H.; & KERR, S.A. (1990, August). Comparing the effects of alcohol and intelligence on text recall and recognition. *British Journal of Psychology, 81*, 299-313.

Studies the effects of alcohol and intelligence on text recall and recognition for 40 British males divided into high and low groups on the basis of scores on the AH5 Intelligence Test, adapted for computer administration. Subjects read short passages, recalled as much of the information as possible, and then selected from sentences those that appeared in the original passage. During one session half received alcohol and half didn't, with the order counterbalanced in a second session. Subjects recalled more propositions from the second reading session than from the first, although they also took longer to read the passage. Reading time was slowed after taking alcohol. Alcohol impaired the performance of high intelligence test scorers more than low scorers, with fewer propositions recalled. Alcohol impaired the recall of both higher and lower level propositions, and more

incorrect sentences were erroneously recognized. The findings are interpreted as suggesting that both intelligence and alcohol affect the capacity of short term memory, but alcohol also interferes with the ability to select between the higher and lower level propositions.

BYRD, MARK. (1991, July/August). Adult age differences in the ability to read and remember metaphor. *Educational Gerontology, 17*, 297-313.

Investigates, within two experiments, how age differences in adults influence their ability to read and recall metaphoric information. Experiment 1 included 40 young (mean age 19.8 years) and 40 old (mean age 65.3) adults who were asked to read literal sentences, or sentences containing common or novel metaphors. Sentences were displayed on a video terminal as reading time for each sentence was recorded. Upon completion of the sentence readings, participants were given an unexpected timed task in which they were asked to recall aloud each sentence. Recall cues pertaining to each sentence referred to literal information within the sentence (the topic or the vehicle) or information which might be inferred (the ground). ANOVA procedures applied to the data revealed a significant main effect for age and a significant interaction effect between age and sentence type. Older adults displayed slower reading times than young adults; although both young and old adults read and recalled common metaphors and literal information with similar efficiency. With respect to novel metaphors, older adults' memory for sentences cued for literal information was found to be nearly equal to that of younger adults, but it was not equal for sentences cued for inferential information. Participants in Experiment 2 were 60 young (mean age 18.9) and 60 old (mean age 67.3) adults. Using procedures similar to Experiment 1, metaphoric and literal sentences were presented in coherent texts of one to five sentences. Presence of context increased the sentence recall levels of all participants. Old adults demonstrated a greater measure of improvement in their ability to make linguistic analyses, with longer contexts yielding greater benefits than shorter contexts.

DANIELSON, KATHY EVERTS, & WENDELIN, KARLA HAWKINS. (1992, March/April). The writing preferences of young adults. *The Clearing House, 65*, 245-252.

Investigates writing preferences of 108 sixth graders, 184 eleventh graders, and 74 college juniors and seniors enrolled in reading and language arts methods courses and determines if significant differences exist across different grade levels. Subjects responded to a Writing Preference Attitude Survey and to open-ended questions about their writing. The survey examined students' preferences for four different types of writing. Significant differences (analysis of variance) were found for the following: college students showed a greater preference than elementary and secondary students for personal over creative writing, personal over school writing, casual over creative writing, and casual writing over school writing. Some differences were found between high school and elementary students. Open-ended questions addressed favorite authors, how students learned to write, sources of ideas, characteristics of good writers, and how students thought they could improve their writing.

DYSON, ANNE HAAS. (1992, January). The case of the singing scientist: A performance perspective on the "stages" of school literacy. *Written Communication, 9*, 3-47.

Offers a case study of one first grade child whose school writing activities evolved into performances. The subject, Jameel, was an African-American child from a low income background attending an urban primary school. Data collection involved classroom observations that extended from September through mid-June of one school year. Most observations were made during a 3-hour morning period. The basic data-gathering unit was the literacy and/or story making event, and the data included observational notes, audiorecordings of the child's spontaneous talk during literacy activities, and photocopies of his drawings and writ-

ten products. Analysis of the data revealed that Jameel's use of the sense and music of language shaped his participation in the teaching and learning life of the classroom. His sensitivity to the music of language seemed to contribute to his enjoyment of and progress within the classroom reading program. Jameel's sense of language was not always understood. His perceived lack of literal sense led to teacher requests for complex revisions beyond the simple additions of words or punctuation. Further, Jameel resisted the assumption that his audience could also be his official helper. He often felt that peer and teacher conferences violated his rights as author/performer. But given other kinds of social relationships, especially those that did not confound audience and official helper roles, Jameel more readily reflected, not only on written text but also on oral performance and audience response.

## IV-13 Factors related to reading disability

BAKKER, DIRK J. (1990). *Neuropsychological Treatment of Dyslexia*. Oxford, UK: Oxford University Press.

Compiles and summarizes research, including the author's, on dyslexia and its treatment. The current volume is a translation of a work originally published in the Netherlands; much of the research is based on the author's research with dyslexics in Amsterdam. The author posits two types of dyslexics: L-dyslexics, who are relatively rapid but inaccurate readers, and P-dyslexics who are relatively slow but accurate readers. Dyslexics of the L and P type use predominantly left and right hemispheric reading strategies, respectively. L-dyslexics tend to make substantive errors such as omissions and additions of letters and words, word mutilations, and inaccuracies. P-dyslexics tend to make time consuming errors such as repetitions and fragmentations. The neurological treatment and results of such treatment with dyslexics are discussed and reported on.

RACK, JOHN P.; SNOWLING, MARGARET, J.; & OLSON, RICHARD K. (1992). The nonword reading deficit in developmental dyslexia: A review. *Reading Research Quarterly, 27*, 28-53.

Reviews a large number of studies comparing dyslexics and reading-level-matched normal readers on measures of phonological reading skill to evaluate whether dyslexic children have a specific deficit in phonological reading processes. Examined were methodological and theoretical issues in an effort to reconcile inconsistent findings reported in the literature. Approximately two thirds of the studies reviewed found specific phonological reading problems in the dyslexic group while the remainder did not. In none of the studies reviewed were dyslexics superior in reading to their younger reading-level-matched comparison groups. Inconsistent findings between studies were accounted for by such factors as the age of the normal comparison group, complexity of the materials used, and procedures implemented in forming matched groups. It was concluded that the evidence supports the hypothesis of a specific deficit in use of phonological processes in reading. No evidence for distinct subtypes of dyslexia was found.

OLSON, RICHARD; WISE, BARBARA; CONNERS, FRANCES; RACK, JOHN; & FULKER, DAVID. (1989, June/July). Specific deficits in component reading and language skills: Genetic and environmental influences. *Journal of Learning Disabilities, 22*, 339-348.

Attempts to determine whether RD children experience a specific deficit in one of the component processes in reading rather than an equal depression in all component reading processes. Environmental and genetic factors that interface reading disabilities are consid-

ered. Subject pairs matched on reading level, IQ, educational background, and diagnosis indicating freedom from neurological damage included twin and/or sibling pairs of RD students and of nondisabled students. The RD group's range in age was higher than that of the nondisabled group. Phonological coding was assessed by oral reading of nonwords, and orthographic coding was determined by discrimination of words from homophonic nonwords. A second measure of timed word recognition was administered to account for error variance in the variables used for matching. Correlational and hierarchical regression analyses determined that phonological coding, but not orthographic coding, was significantly depressed for most RD children. Findings suggest that there is a developmental deficit in the phonological coding of nonwords for most RD children. Contrasts of identical twins with fraternal twins provided evidence for the genetic etiology of the phonological coding deficit.

HURFORD, DAVID P., & SANDERS, RAYMOND E. (1990, December). Assessment and remediation of a phonemic discrimination deficit in reading disabled second and fourth graders. *Journal of Experimental Child Psychology, 50*, 396-415.

Assesses the phonemic processing of disabled readers using phonemic stimuli in the form of consonant-vowel syllables. Experiment 1 examined 27 second grade and 24 fourth grade disabled and nondisabled readers' ability to discriminate between combinations of two-syllable, phoneme pairs with varying intersyllable intervals (ISI). Tests of ANOVA yielded main effects due to grade, reader group, and ISI in addition to a significant interaction of grade and reader group. Newman-Keuls comparisons of the performance of the four groups revealed that the main effects of grade and reader group, and the interaction of these two variables, were solely due to the poorer performance of the second-grade disabled readers ($p < .05$) relative to the remaining three groups. Fourth grade disabled readers performed nearly identically to their reading-matched second grade nondisabled counterparts, suggesting that the deficit seen in the younger disabled readers involves developmental lag. In Experiment 2, 13 second grade and 4 fourth grade disabled readers who performed poorly in Experiment 1 were trained on phonemic stimuli that became increasingly complex. The training significantly improved the disabled readers' performance up to the level of the nondisabled readers in Experiment 1. Overall, the results suggest that disabled readers do experience a phonemic processing deficit, but that it can be remedied with appropriate training.

TORGESEN, JOSEPH K.; WAGNER, RICHARD K.; SIMMONS, KAREN; & LAUGHON, PAMELA. (1990, Fall). Identifying phonological coding problems in disabled readers: Naming, counting, or span measures. *Learning Disability Quarterly, 13*, 236-243.

Reviews research on assessment and diagnosis of phonological coding problems in disabled readers. The authors define phonological coding as the representation of information about the sound structure of verbal stimuli in memory. Deficits in phonological coding are related to difficulties in acquiring early word reading skills. Most widely used in assessing phonological coding problems in disabled readers has been memory span for such items as digits, words, or letters. It is contended that naming rate or simple articulation rate tasks may be more sensitive measures of difficulty in decoding. Proposed as a best measure of phonological coding difficulties is a combination of tasks being developed.

BEECH, JOHN R., & AWAIDA, MAY. (1992, March). Lexical and nonlexical routes: A comparison between normally achieving and poor readers. *Journal of Learning Disabilities, 25*, 196-206.

Compares 38 poor readers who were 9 years old chronologically with 40 normally achieving readers (ages 7 and 8) who were matched in RA. Subjects from 18 schools in the

United Kingdom were matched on the RPM, reading and spelling, SES, ethnicity, and gender. Instruments used for matching included the British Abilities Scale, the NARA, and the Schonell Spelling Test. Subjects completed the British Picture Vocabulary Scales. They read different word types (regular, exception, and pseudowords) and completed a homophonic pseudoword test. They also were tested for memory span, visual short term memory of letter-like characters, and matching letter-like sequences. A significant difference was found in reading pseudowords between the poor and normally achieving readers, but no differences were found in vocabulary scores. Both groups read significantly more regular than irregular words and found the regular words to be easier reading than the irregular. There was a significant main effect for homophony and for similarity on memory span, with poor readers scoring lower. Differences also were found in retention of letter-like sequences. Results suggest poor readers have problems with grapheme-phoneme conversion skills and greater reluctance to give up lexical routes.

BELL, TREVOR K. (1990), December). Rapid sequential processing in dyslexic and ordinary readers. *Perceptual and Motor Skills, 71*, 1155-1159.

Performs two experiments to see if dyslexic readers perform as well as normal readers on a rapid sequential short term memory task. In Study 1, subjects included 42 dyslexic and 42 normal readers from three high schools. Dyslexics were two or more years below level in reading and spelling on the NARA and the Young Parallel Spelling Tests; controls showed no reading retardation. Subjects were tested individually on a series of seven figure chips adapted from the Visual Sequential Memory subtest of the ITPA. Using 1-way ANOVA, neither mean time nor mean error showed significant differences between the two groups. For Study 2, the 10-piece form board from the Stanford-Binet Intelligence Scale was adapted for use. Again subjects were tested individually and were asked to complete the board as quickly as possible. Dyslexics were significantly slower than normal readers. Inasmuch as short term memory was not involved in the second task, it was felt that short term memory problems were not involved in dyslexics' performances on rapid sequential processing tasks.

CATTS, HUGH W. (1991, November). Early identification of reading disabilities. *Topics in Language Disorder, 12*, 1-16.

Reviews research on the relation between oral language problems and reading disabilities. Much of the research suggests that various oral language problems observed in preschool and/or kindergarten are predictors of reading disabilities. The implications of various findings for early identification of reading difficulties are discussed.

MORRISON, DELMONT, & MANTZICOPOULOS, PANAYOTA. (1990, July/August). Predicting reading problems at kindergarten for children in second grade: SEARCH as a screen. *Remedial and Special Education, 11*, 29-36.

Compares the two-year predictive validity of SEARCH (a test designed to assess delays in the acquisition of spatial and temporal information) with the predictive validity of academic achievement tests as screens for identifying children at risk for developing reading problems. SEARCH was administered to 668 kindergarten children who were followed through second grade. Six different cutoff scores on SEARCH were used to establish risk status, and reading scores at or below the 30th percentile were used to establish both at-risk status and inadequate reading at second grade. The use of SEARCH scores indicating major risk resulted in false negative error rates in the 52% to 69% range and false positive error rates in the 56% to 70% range. The use of academic tests to predict reading problems resulted in error rates of 65% for false negative and 62% for false positive. The results are discussed in the context of issues in measuring perceptual and cognitive performance in an age range where normal and deviant variations are difficult to assess except in extreme cases.

DOBBINS, D. ALAN, & TAFA, EUFIMIA. (1991, June). The "stability" of identification of underachieving readers over different measures of intelligence and reading. *British Journal of Educational Psychology, 61*, 155-163.

Examines stability as a function of measures used to identify severely underachieving readers. Subjects for the study were 300 boys and 278 girls between the ages of 9 and 11. Subjects came from eight primary schools that differed in size, type of location, internal organization, and methodologies used for reading instruction. IQ measures administered to all subjects included the verbal and nonverbal subtests of the Cognitive Abilities Test and RPM. Reading tests administered included four subtests of the Edinburgh Reading Test (Vocabulary, Structure, Comprehension, and Retention) and the NFER BD Reading Test. Regression analysis, with CA and nonverbal IQ as predictor variables, was used to calculate 16 residual distributions. Results suggest that the identification of severely underachieving readers is fairly stable over combinations of different reading and IQ measures.

CARVER, RONALD P. (1991, September/October). Using letter-naming speed to diagnose reading disability. *Remedial and Special Education, 12*, 33-43.

Examines the use of letter-naming speed as a measure of cognitive speed and reading rate. A large battery of computerized measures was administered to 47 subjects from grades 2 through 10. All subjects attended parochial schools in a large metropolitan area. Factor analysis procedures applied to seven rate measures yielded two separate factors that correlated .37: a cognitive speed factor ($C_S$) and a rauding rate level factor ($R_L$). When controlled for grade level, new measures derived by averaging across tests that loaded highly on $C_S$ (Speed of Thinking and Alphabet Rate) and $R_L$ (Maximum Oral Reading and Recognition Rate) correlated .51. A weak correlation (-.18) between $C_S$ and traditional measures of intelligence called cognitive power ($C_P$) also was noted. Results support the notion that $C_S$, as measured by letter-naming speed, and $C_P$ are equally important factors to be considered in the diagnosis of reading disabilities.

KIRCHER, ANDREW C., & SANDOVAL, JONATHAN. (Winter, 1991). Reading disability and the Differential Ability Scales. *Journal of School Psychology, 29*, 293-307.

Contrasts performances of RD and normal children on various subtests of the Differential Ability Scales (DAS). Subjects were 60 children between the ages of 8 and 10. Thirty were from a northern California school district where they had been identified as RD. The RD children were given the standardized version of the DAS, and each child was scored on both a speeded and an unspeeded procedure for Pattern Construction. The other 30 children were selected from the DAS standardization sample and matched with the RD group on age, ethnicity, gender, parents' SES, and urban acculturation. Findings of discriminant and cluster analyses suggested RD children do exhibit a characteristic profile on the DAS. Their performance was relatively poor on achievement tests, as well as on the Recall of Digits and Recall of Objects subtests. A subgroup of RD pupils was found to be deficient in Speed of Information Processing.

KINSBOURNE, MARCEL; RUFO, DOLORES TOCCI; GAMZU, ELKAN; PALMER, ROLAND L.; & BERLINER, ANN K. (1991, September). Neuropsychological deficits in adults with dyslexia. *Developmental Medicine and Child Neurology, 33*, 763-775.

Explores the nature of neuropsychological deficiencies in adults with dyslexia. Subjects were 23 severely dyslexic adults matched with 21 normally reading adults on age, sex, IQ, education, and occupational status. Eleven adults who had recovered from dyslexia served as an additional contrast group. Subjects were administered an extensive battery of language tests, nonverbal cognitive tests, reading ability tests, neuromotor tests, as well as neuropsychological tests, with the latter type being readministered for reliability purposes.

Data were submitted to 1-way ANOVA procedures followed by specific contrast analyses between groups when overall differences were significant. Results showed the neuromotor and neuropsychological test batteries to be reliable correlates of the degree of reading retardation across a wide range of reading ability. Adult dyslexics consistently demonstrated several neurocognitive deficiencies other than those involving reading. These included verbal learning and memory deficits, deficient automatization of language subprocesses, temporal order deficits, and deficient dexterity in right sided sequential finger and foot movement.

ROUSSELLE, CHRISTOPHE, & WOLFF, PETER H. (1991, October). The dynamics of bimanual coordination in developmental dyslexia. *Neuropsychologia, 29*, 907-924.

Compares, in two experiments, bimanual motor coordination between dyslexic subjects and normally reading controls. The dyslexic sample consisted of nine individuals recruited from a residential college for young adult dyslexics of normal intelligence. All were reading below a sixth grade level as determined by the GORT. Controls were nine adults with no history of reading difficulties. Finger tapping speed was collected for symmetric and asymmetric unimanual and bimanual coordinating tasks. Unimanual finger tapping and rhythmic bimanual alternations did not discriminate between the two groups. However, asynchronous, asymmetric bimanual tasks did identify significant group differences. In normal readers, manual asymmetries of motor control had a significant effect on the relative phasing of finger movements, but no such effects were found in dyslexics.

PARIS, SCOTT G., & OKA, EVELYN R. (1990, Winter). Strategies for comprehending text and coping with reading difficulties. *Learning Disability Quarterly, 12*, 32-42.

Examines the research literature to note reading and coping strategies adopted by LD children in the course of their development. Two aspects of strategic reading that are difficult for LD children are discussed: text-processing strategies and metacognition. Research in motivational and coping strategies is reviewed under two headings: (1) helplessness and maladaptive coping tactics, and (2) attributional retraining. Another section of the article deals with innovations in reading instruction shown to be successful with LD children's developmental abilities. Incorporated under this section are improving teacher explanations, reciprocal teaching, and direct explanation. Instruction incorporating the goals of enabling and empowering pupils was found likely to lead to stable improvement in both acquisition and use of adaptive learning strategies.

DOUGLAS, VIRGINIA I., & BENEZRA, ESTHER. (1990, December). Supraspan verbal memory in attention deficit disorder with hyperactivity normal and reading-disabled boys. *Journal of Abnormal Child Psychology, 18*, 617-638.

Compares the performance of 84 Montreal elementary grade boys (ages 7 to 12) diagnosed as either Attention Deficit Disorder with Hyperactivity (ADDH), Reading Disabled (RD), or normal. Each subject was presented with picture-word lists and related/unrelated paired associate tasks. Immediate and delayed recognition and recall tasks required increasingly organized, deliberate rehearsal strategy, sustained strategic effort, and consideration of response alternatives. Results of 5-way ANOVA with number of words correctly recalled serving as the dependent variable indicated significant difference only between RD and controls. Although ADDH students recalled a somewhat smaller number of words, the difference was not significant. Three-way ANOVA followed by Tukey analysis of mean scores indicated that ADDH boys coped successfully with related pairs of words, but recalled and recognized fewer unrelated pairs than did controls. The researchers suggest that ADDH boys were making less use of elaborate mnemonic strategies.

PURCELL-GATES, VICTORIA. (1991, June). On the outside looking in: A study of remedial readers' meaning-making while reading literature. *Journal of Reading Behavior, 23*, 235-253.

Compares the meaning-making processes of remedial readers during the reading of literary text with the performance of more proficient readers (in an earlier study). Six children in grades 6 through 8 who were attending a university-based literacy center read aloud two stories and verbalized their thoughts during reading. Four previously established categories of readers' stances toward literature were used to compare the resulting think-alouds: (1) being out and stepping into an envisionment; (2) being in and moving through an envisionment; (3) stepping back and rethinking what one knows; and (4) stepping out and objectifying the experiences. A qualitative analysis was conducted as other categories emerged, and all the think-aloud responses were recategorized for difficulties experienced by remedial readers. Analysis revealed that the remedial readers spent a disproportionate amount of time being out of envisionments—either attempting to step into one or failing to step in. The remedial readers consistently failed to construct evolving wholes and struggled with the language of literary discourse. The overall image of remedial readers drawn by the researcher was one of being on the outside looking in.

HENNESSEY, JOAN H. (1990, October). At-risk community college students and a reading improvement course: A longitudinal study. *Journal of Reading, 34*, 114- 120.

Compares the GPA and the number of credits attempted and earned for: (1) students who completed a required reading improvement course (n=79); (2) students who did not complete the course (n=61); (3) students who avoided the course (n=72); and (4) students who were exempt from the course (n=72). Findings suggest that the students who had completed the reading improvement course had higher GPAs, more credits attempted and earned, and the lowest dropout rate. Fewer noncompleters held satisfactory academic status, many of whom withdrew from school. The academic status of the students who avoided the course was comparable to that of those students who completed the course, suggesting that some students are incorrectly identified as in need of developmental reading skills.

PRIOR, MARGOT R. (1989). Reading disability: "Normative" or "Pathological." *Australian Journal of Psychology, 41*, 135-158.

Poses arguments supporting the position that reading disability is normative and disputes the position that it is pathological. The case for the normative view is made through a discussion of studies pertaining to reading behavior, correlates of reading failure, and primary etiological factors.

CORNWALL, ANNE, & BAWDEN, HARRY N. (1992, May). Reading disabilities and aggression: A critical review. *Journal of Learning Disabilities, 25*, 281-288.

Examines the research literature studying the relation between specific reading disability and aggressive behavior. Cross-sectional, follow up, and longitudinal studies are included in the review. In particular, the reviewed studies deal with the specific reading disability in association with parent, teacher, juvenile justice, and self-report ratings of antisocial behavior. The criteria used for inclusion of a study were: (1) adequate definition and assessment of reading disability for subjects, (2) presence of a matched control group or random subject selection, and (3) an objective definition of antisocial behavior. The studies reviewed have been conducted primarily with male subjects. Data from longitudinal studies have suggested that there is not a strong association between reading disability and behavior problems. What limited evidence exists indicates that behavior difficulties predate reading disorders, while there is no evidence that reading disabilities predate aggressive behavior.

The findings suggest that specific reading disabilities do not lead to aggressive or delinquent behavior.

## IV-14 Sociocultural factors and reading

CHALL, JEANNE S.; JACOBS, VICKI A.; & BALDWIN, LUKE E. (1990). *The reading crisis: Why poor children fall behind.* Cambridge, MA; Harvard University Press.

Presents findings from a study designed to investigate aspects of the literacy and language achievement of elementary school children from low-income homes. A total of 30 children from grades 2, 4, and 6, identified as below-average or above-average readers, were followed for two years. Reading tests administered included the GORT, the WRAT, and the Roswell-Chall Diagnostic Test of Word Analysis Skills. Also consulted in identifying subjects were scores on the most recently school-administered silent reading test. Below-average pupils were selected from those falling in stanines 2 and 3, while above average subjects came from those with reading scores in stanines 5 and 6. Data on reading, writing, and language were collected at the end of each year of the study. In addition, data on families and classrooms were collected. Home and family data included interviews, as well as observations of a simulated homework assignment which a parent was asked to help the child complete. Classroom data included observations, interviews, and questionnaires. Teachers were asked to complete questionnaires about their instructional practices and emphases and about specific pupils' strengths and weaknesses. Reading was assessed with the Roswell-Chall Diagnostic Assessment of Reading and Teaching Strategies, individually administered in May of each year of the study. At the end of the first year, pupils achieved at expected grade levels in grades 2 and 4, but were about a half year below grade norms in grade 6. Reading test results were essentially similar at the end of the second year. When the five subtests of the Roswell-Chall were analyzed, it was found that children tended to score at or above grade level on all five tests at grade 2, but fell below expected grade norms in word meaning, word recognition, and spelling at fourth grade, and below grade level on all subtests at grade 6. The patterns were similar at the end of the second year except for oral reading scores in grade 7. Differences between the two groups of readers appeared in grades 4 and 6, but not in grade 2. Above-average readers in grades 4 and 6 scored above expected grade levels, but below-average readers' scores began to decelerate at grade 4. On the word meaning subtest, which did not require reading, both groups fell below grade norms at the two upper grades. Home conditions positively related to reading achievement in grades 2 and 3 included adult interaction with children and homes that provided a good literacy environment. At grades 4 and 6, home conditions facilitating reading achievement included higher literacy and educational attainment of parents as well as parental interest in their children's educational achievement. Reading comprehension was found to increase under classroom conditions stressing challenging materials and direct instruction and practice.

ALSPAUGH, JOHN. (1991, Spring). Out-of-school environmental factors and elementary-school achievement in mathematics and reading. *Journal of Research and Development in Education, 24,* 53-55.

Examines the influences of factors outside of school control that account for differences in elementary school achievement. Thirty-nine midwestern elementary schools were compared by median percentile rank for second grade reading and mathematics scores on the CAT. Results of regression equations (with the out-of-school factors as independent variables) showed that over 50% of the variance in second grade reading and over 40% of the variance in second grade mathematics achievement could be attributed to the following fac-

tors: (1) percentage of students eligible for free or reduced lunch; (2) percentage of students living with two parents; (3) percentage of student mobility; and (4) percentage of minority students. However, the percentage of minority students appeared to be minimally related to the achievement levels with the 39 schools included in the study.

RASINSKI, TIMOTHY V.; BRUNEAU, BEVERLY; & AMBROSE, RICHARD P. (1991). Home literacy practices of parents whose children are enrolled in a whole language kindergarten. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 37-43). Pittsburg, KS: College Reading Association.

Asks eight parents whose children had been enrolled in a whole language kindergarten program about their home literacy practices. The subjects were all mothers whose children (four girls and four boys) were successful in kindergarten although not considered exceptional. Each parent was interviewed by one of the researchers during two months at the end of the school year. The interviews probed parents on their approaches to literacy learning, home literacy experiences, and their satisfaction with the kindergarten experience their child received. Each interview lasted at least 30 minutes, was recorded and later transcribed. Categorical analysis was employed and revealed common home-based literacy activities including reading aloud, taking dictation, nurturing an interest in words, writing letters, and providing environments that were functional, filled with books, and in which parents acted as personal models of literate behaviors. The similarities among whole language practices and home-base literacy experiences are discussed.

ALWIN, DUANE F. (1991, October). Family of origin and cohort differences in verbal ability. *American Sociological Review, 56*, 625-638.

Explores whether cohort differences in family experiences account for the decline in verbal test scores for students in the 1960s and 1970s by analyzing nine NORC General Social Surveys carried out between 1974 and 1990. Suggests that long term trends in verbal scores must be examined within the larger context of social change. Social and economic characteristics of the respondent's family of origin and amount of schooling are associated with the largest differences in vocabulary knowledge. Number of siblings has a significant influence on verbal skills but is less important than other family factors. Birth order was not independently linked to verbal scores. The researcher concludes that there is no support for the hypothesis that cohort differences in family experiences account for the trends in declining verbal ability across cohorts in the population in the United States.

REYNOLDS, ARTHUR J. (1991, Summer). Early schooling of children at risk. *American Educational Research Journal, 28*, 392-422.

Reports results of a longitudinal study of 1,530 lower-income minority children's first- and second-year reading and mathematics achievement, as well as their socio-emotional maturity. Data were collected from children and teachers over four time periods and included school readiness attributes, intervening kindergarten influences, and intervening first-year social-psychological influences. Major results indicated that cognitive readiness in kindergarten had pervasive indirect effects on first- and second-year outcomes, and that variables directly alterable by families and schools (prekindergarten experience, motivation, mobility, and parent involvement) significantly influenced early school outcomes either directly or indirectly. The influence of sex (in favor of girls), prior achievement, motivation, and school mobility increased over time. Of the antecedent variables that had significant effects on year 1 reading achievement, Entering Kindergarten Readiness and Kindergarten Reading had the greatest total effects. All variables had significant total effects on reading in year 2. Most notable were the effects of Entering Kindergarten Readiness, Motivation, Parent Involvement, and Mobility.

STEVENSON, JIM, & FREDMAN, GLENDA. (1990, July). The social environmental correlates of reading ability. *Journal of Child Psychology and Psychiatry, 31*, 681-698.

Investigates the relation between sociocultural and family environment factors on the reading and spelling abilities, as well as IQ, for 550 13-year-old twins (M=292; F=258). Four measures of social environment were used as predictor variables: (1) social circumstances (including parents' occupations, housing tenancy and size, and family size), (2) parents' background (including age parents completed full-time education, countries of origin, and marital status), (3) emotional atmosphere at home (including marital rating, parents' expression of warmth and criticism, and parents' health scores), and (4) family reading behaviors (including parents' reading problems and habits, as well as their reading to children and helping with homework). All subjects were administered the WISC-R, NARA, the Schonell Graded Word Reading Test, and the Schonell Spelling Test. IQ-adjusted reading scores were derived for each subject. Measures significantly related to reading were entered in a multivariate analysis. Results indicated consistent relations between many of these measures and the dependent variables. Most of the effects of environmental influences on children were general, i.e., related to IQ and not specifically related to reading. After controlling for the effects of IQ on reading, only family size and some aspects of parent-child relationships were significant predictors of reading ability.

ROWE, KENNETH J. (1991, February). The influence of reading activity at home on students' attitudes toward reading, classroom attentiveness, and reading achievement: An application of structural equation modeling. *British Journal of Education Psychology, 61*, 19-35.

Examines the extent to which children's reading achievement is influenced by the effects of home background factors, attitude toward reading, and attentiveness in the classroom. Accepting that each of these factors and their interactions affect reading, an explanatory model was developed and tested, using structural equation modeling (SEM) to estimate the magnitude and direction of the effects on pupil achievement. The final sample was composed of 5,092 children (ages 5 to 14) drawn from a stratified sample of 100 Australian primary and postprimary government and nongovernment schools. Home background and reading activity factors were collected from records as well as from pupil questionnaires. Children's attitudes toward reading also were judged from questionnaires, as well as from teachers' ratings. Reading achievement was determined by scores on a criterion-referenced comprehension test and teachers' ratings. Results of structural equation modeling of the data indicated that regardless of family SES, age, and gender, Reading Activity at Home had significant positive influences on measures of reading achievement, attitudes toward reading, and attentiveness in the classroom.

MACHET, MYRNA P. (1992, February). The effect of sociocultural values on adolescents' response to literature. *Journal of Reading, 35*, 356-362.

Interviews three groups of South Africans to determine if their responses to stories varied with reference to the values inherent in the written texts and to the value systems of their subcultures. Subjects were English-speaking Jewish South Africans, white Afrikaans speakers, and blacks. All were from an urban background and shared similar SES. Subjects were 16 to 18 years of age. Subjects read three texts before appearing for an interview. Each subject ranked each story using Rokeach's lists of terminal and instrumental values and arranged the values in order of descending importance to the subject. Then each respondent wrote down the values they associated with each story read. From all the values listed by all the participants, each respondent ranked the five values thought most important. Values of

the three groups were different, and all groups responded differently to the stories. A need for culturally sensitive book selection is advocated.

BRUNELL, A. VIKING. (1991, September). Language acquisition in the Swedish-speaking minority in Finland. *Journal of Reading, 35*, 14-22.

Addresses several questions about language acquisition in Swedish-speaking schools in Finland. Specifically, the study seeks to find: (1) how different are the Finnish and Swedish speaking students' levels of achievement in Swedish instruction, (2) what impact does home environment have on academic achievement, and (3) what type of language difficulties do students have in environments where Finnish influence is strong. Subjects were 938 to 1,140 students from grades 3, 6, and 9 in Swedish-speaking Finland. At each grade, students' reading comprehension was assessed through multiple-choice questions requiring interpretation of and critical thinking about different texts. In addition, students' background information was compiled from extensive student and teacher questionnaires. Comparisons of test results over grade levels suggested that individual differences in reading comprehension were considerable, with approximately one third of the Swedish-speaking ninth graders displaying considerable underachievement. Correlations of background variables with achievement indicated background variables stemming from the home (mother tongue of the parents, students' use of Swedish in the home and in the peer group, the SES of the home, and the amount of literature available in the home) accounted most for reading and writing achievement. Further correlational analyses showed SES accounted for most of the variance in achievement variables.

## IV-15 Reading interests

MCKENNA, MICHAEL C.; KEAR, DENNIS J.; & ELLSWORTH, RANDOLPH A. (1991). Developmental trends in children's use of print media: A national study. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors; Issues in literacy research and instruction* (pp. 319-324). Chicago, IL: National Reading Conference.

Examines proportions of elementary students reporting having used six types of printed materials in relation to grade, gender, and reading ability. A national sample of 18,185 children (grades 1-6) was stratified by gender and ethnicity and represented 95 school districts in 38 states. A self-reporting checklist was used to determine whether the students had used/read comic books, funnies, library books, newspapers, encyclopedias, and magazines during the first half of the school year. Reports on having read comic books revealed developmental gender-base difference. The proportion of boys reported having read comic books during the school year rose from .69 (grade 1) to .75 (grade 6), but declined for girls (.60 to .50). The proportion of children who read the funnies appeared to increase with age (despite gender) and to favor better readers regardless of age; proportion of reading library books appears to drop with age irrespective of reading ability. The proportion of pupils who read the newspaper appears to rise comparably through the elementary grades for boys and girls, but ability-based differences appear by grade 3. One-fourth of children (grades 1-4) do not read magazines at all. A third to half of children at all elementary levels report no use of encyclopedias.

GERLACH, JEANNE M., & RINEHART, STEVEN D. (1992, April). Can you tell a book by its cover? *Reading Horizons, 32*, 289-298.

Explores reasons for selecting books given by 31 seventh and eighth grade pupils from a large, middle-class suburban public school. Ten books of fiction were randomly chosen for subjects to examine and they individually selected books they might want to read. As they chose the books, they thought aloud about the reason they decided on certain books. Protocols were taped. The predominant clue used was the summary inside the cover flap, followed by cover illustration, title, interest in the book's topic, size of print, and vocabulary difficulty. Subjects valued peer and teacher opinions about books.

COY-SHAFFER, JOYE, & PETTIT, SHIRLEY. (1992, June). Independent reading in the sixth grade: Students' reading choices. *Florida Reading Quarterly, 28*, 20-22.

Questions 279 sixth grade middle school pupils about preferred categories of books when they have free choice. Pupils responded to a one-page survey concerning 14 categories and favorite authors and titles of books. The top six categories were mysteries, adventure, scary, humor, romance, and sports. Girls chose Judy Blume, Ann Martin, Beverly Cleary, Stephen King, Francine Pascal, and Carolyn Keene as favorite authors. Titles of most interest to girls were books in series. Boys' selection of authors was more varied, with only two having a high frequency of responses—Judy Blume and Stephen King. Titles for boys were varied. Historical fiction and geography were of least interest to subjects.

GREENLEE, ADELE; MONSON, DIANNE; & TAYLOR, BARBARA. (1992, Spring). Responses logged to formula series and recommended books. *MRA Highlights, 12*, 6.

Explores children's response to self-selected formula books in comparison to recommended books. Twenty-five sixth graders, who kept logs of books they read independently over a 4-month period, were interviewed individually and asked to discuss one series and one nonseries book noted in their log entries. A common mode of response for the subjects was to retell the stories they had chosen. Subjects did not often refer to the formal aspects of the writing or engage in interpretation. Preference for books was rarely based on literary criteria, but rather on subject matter and self-perceived appropriateness. Most often, reader responses or both series and recommended books similarly indicated a personal level of engagement with the events and characters in the stories.

## IV-16 Attitudes and affect toward reading

SCHELL, LEO M. (1992, Spring). Students' perceptions of good and poor readers. *Reading Improvement, 29*, 18-24.

Surveys children's perceptions of selected personal and social attributes of good and poor readers. Subjects were 562 children in grades 1 through 6 in two elementary schools. In mid-March, after pupils had time to become aware of their own and their classmates reading levels, they were twice administered a bipolar semantic differential scale describing eight personal and social characteristics. The first administration asked them to describe good readers, and the second asked them to describe poor readers. Analysis of the data strongly indicated that poor readers are viewed as having more negative personal and social traits than good readers, no matter the grade level, the gender, or the self-reported reading group assignment of the respondent.

MCKENNA, MICHAEL C., & KEAR, DENNIS J. (1992, Spring/Summer). Measuring attitude toward reading; A new tool for teachers. *Arizona Reading Journal, 20*, 105-117.

Presents the Elementary Reading Attitude Survey along with a discussion of its development and suggestions for its use. The instrument was developed to enable quick and reliable assessment of children's attitudes toward reading. Thirty-nine items were formulated, 24 pertaining to attitude toward recreational reading and 15 pertaining to attitude toward academic reading. Each item presented a brief statement about reading followed by four pictures of a cartoon character. Each picture portrayed a different attitude ranging from very positive to very negative. The prototype of the instrument was administered to 499 elementary children. For each of the two item sets, recreational and academic, a final set of ten items each was selected on the basis of interitem coefficients of correlation. The revised instrument was normed on a nationally reflective sample of 18,138 children in grades 1 through 6. Cronbach Alpha, a statistic designed to measure internal consistency of attitude, was computed at each grade level of both scales and for the composite score. This yielded reliability coefficients ranging from .74 to .89. Factor analyses, among other techniques, produced evidence supporting the claim that each of the survey's two scales reflects values and discreet aspects of reading attitude.

LINEK, WAYNE; STURTEVANT, ELIZABETH G.; RASINSKI, TIMOTHY V.; & PADAK, NANCY. (1991). Second grade urban students' attitudes toward reading. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 77-86). Pittsburg, KS: College Reading Association.

Studies reading attitudes, reading achievement, and oral reading performance of urban second graders. Eighty-fourth second grade children from five classrooms in two urban schools participated in the study. Attitudes toward reading were determined using the Heathington Primary Reading Attitude Scales. Mean scores and standard deviations were reported for free classroom reading, organized classroom reading, reading at the library, reading at home, other recreational reading, and total reading. Reading achievement was assessed using the comprehension portion of the GMRT. Oral reading performance was assessed using the Basic Reading Inventory which examined total oral miscues, meaning-changes miscues, and reading rate. Overall, urban second graders had positive attitudes toward reading regardless of their reading achievement. There was a noticeable trend that library reading was the most favored and organized classroom reading least favored by students. All boys and girls scored below average on the GMRT at the 30th and 37th percentiles, respectively. No significant trends emerged between boys and girls regarding oral miscues; however, girls read faster than boys.

STURTEVANT, ELIZABETH G.; LINEK, WAYNE; PADAK, NANCY; & RASINSKI, TIMOTHY V. (1991). Reading perceptions of urban second graders. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 63-69). Pittsburg, KS: College Reading Association.

Describes the reading perceptions of 78 second graders in a midwestern urban area in relation to reading achievement. Children from five classes at two urban schools were individually interviewed at the beginning of their second grade year. Children were also given the comprehension portion of the GMRT. Each interview answer was rated as a whole and given a perception score ranging from 1-5. These were compared with the GRMT score and later categorized and described. Results indicate that the second graders held widely varying perceptions of reading. Although children with more meaningful reading perceptions tended to have higher comprehension scores, these relations were not statistically significant. Different questions yielded different types of responses. When children were asked to be "reading judges" they focused on oral performance. Reading enjoyment was associated with meaning, and questions about instruction elicited responses reflective of basal instruction with a split emphasis on decoding and meaning.

TUNNELL, MICHAEL O.; CALDER, JAMES E.; JUSTEN, JOSEPH E. III; & PHAUP, E. STEPHAN. (1991, Winter). Attitudes of young readers. *Reading Improvement, 28*, 237-243.

Reports the field testing of an 18-item Likert scale attitude survey administered to 508 pupils in grades 2 to 6 in two states. Subjects completed the surveys with their classroom teachers, and marked reactions to statements as they were read aloud. Children tended to have mildly favorable attitudes in grades 2 to 4, but attitudes deteriorated for fifth and sixth graders.

GRAY, JANELLE M. (1992, Spring). Summary of master's thesis: Reading achievement and autonomy as a function of father-to-son reading. *The California Reader, 25*, 17-19.

Examines the effects of father-to-son reading on sons' reading autonomy and reading achievement. All males in the fourth, fifth, and sixth grades in one elementary school were asked to respond to a questionnaire asking if they were being read to by their fathers and, if so, the quantity of time involved in the activity. Of the 85 boys who received the questionnaire, 57 participated. Subjects also completed a Structured Reading Autobiography form to ascertain their independent reading habits. The CTBS provided reading achievement data for the subjects. Various statistical procedures revealed father-to-son reading is positively related to fourth, fifth, and sixth grade reading achievement. Boys who continued to have father-to-son reading beyond primary school years achieved higher reading scores than boys who did not. The amount of time spent in father-to-son reading did not appear to be significant. Boys whose fathers modeled pleasure reading displayed higher degrees of pleasure reading than boys whose fathers did not.

SMITH, M. CECIL. (1992, Spring). A comparison of good and poor readers on a measure of adults' reading attitudes. *Research and Teaching in Developmental Education, 8*, 51-55.

Compares the reading attitude scores of three samples of adult readers: 169 freshman university students identified as having reading and academic difficulties, 61 upper-division students enrolled in teacher education courses, and 111 adults from the community. Freshman students with reading difficulties were identified from the comprehension subtest scores on the NDRT. All subjects were administered the Adult Survey of Reading Attitudes (ASRA), a 40-item Likert-type scale containing five subscales. Subscale scores of the three groups were compared using ANOVA procedures. Significant differences were found among groups on four of the subscales, with the freshmen exhibiting somewhat poorer attitudes toward reading than the other two groups. Additional analyses of this subgroup indicated that reading performance was independent of reading attitude.

HAMANN, LORI S.; SCHULTZ, LOREE; SMITH, MICHAEL W.; & WHITE, BRIAN. (1991, September). Making connections: The power of autobiographical writing before reading. *Journal of Reading, 35*, 24-28.

Investigates the effect of autobiographical writing before reading on eighth graders from diverse backgrounds. Children from two middle school classrooms were prepared for the reading of a story by being asked to write an autobiographical description of themselves reacting to a situation similar to the one related in the story. Pupils who wrote about relevant personal experiences were more inclined to like the story, stay on task during the text discussion, and respond in a more sophisticated fashion to the story characters.

HANSELL, T. STEVENSON, & VOELKEL, JEAN A. (1992, March). Views of personal literacy within a prison population. *Journal of Reading, 35*, 460-466.

Surveys prison inmates' views of their own personal literacy development. Of the 32 male inmates participating voluntarily in the Chaplain's Literacy Dynamics Program, half were enrolled as students in the program, and half served as tutors. A survey addressing educational, physical, environmental, and psychological variables of reading was administered prior to providing literacy sessions. Findings suggested that more proficient readers (tutors) viewed reading as a purposeful activity. Less proficient participants suggested they had been negatively influenced by physical and environmental liabilities.

## IV-17 Personality, self-concept, and reading

HENSHAW, ANN. (1991, July). "Are you a good reader now?": Secondary school remedial readers' perceptions of their own reading ability and their frames of reference for "good" and "poor" readers. *Reading, 25*, 17-25.

Interviews 52 British pupils ages 11 and 12, asking them to state whether they were currently good readers and why they felt they were or weren't. All were classified by the researcher as better, fair, or poorer readers using a reading age/real age discrepancy index. Responses fell into three categories: positive, negative, and neutral. Less than half (48%) responded as positive, one-third gave negative responses, and 19% gave neutral responses. No statistically significant variations were found in the proportions of better, fair, and poorer readers who gave positive, negative, or neutral responses. Children's perceptions of their ability seemed to have little relation to their actual measured reading ability. Poorer readers more frequently mentioned graphic features of text as a distinction between good and poor readers, while better readers placed more emphasis on performance skills such as fluency and expression. Only four children mentioned comprehension as a contributing factor.

GILLESPIE, CINDY, & POWELL, JANET. (1990). "At-risk" college students: Their perceptions of reading. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 177-183). Provo, UT: College Reading Association.

Finds out how students define reading and describes their perceptions of their ability to read. A total of 191 freshmen (118 females and 73 males) enrolled in a developmental reading class were asked to respond in writing to ten survey questions. A total of 44% of the students' definitions were classified as empiricist (skill-related or bottom-up). These definitions were grouped into four categories: phonics, words, sentences, and skills. Forty-one percent of the responses were classified as rationalist (holistic or top-down) and focused on comprehending, understanding, interpreting, or learning something. Only 5% of the responses could be defined as interactive in nature, while 10% were considered functional (enjoyment or relaxation). More than half of the at-risk students asked considered themselves as readers. The notion that at-risk students have a false perception of their reading abilities held true.

WILLIAMS, EUGENE H., JR.; MORRIS, NANCY T.; NEWMAN, PAMELA P.; WILLIAMS, ANITA A.; & WESLEY, ANDREA L. (1989, Winter). What can we learn from the learning styles of developmental students? *Reading Improvement, 26*, 281-289.

Examines learning style characteristics of developmental and nondevelopmental junior college students. Subjects were developmental students (n=42) placed in developmental courses by having ACT scores of 12 or less and nondevelopmental students (n=44) enrolled in all regular academic courses and having ACT scores above 12. All were administered the Group Embedded Figures Test (GEFT), the Cognitive Preference Test, and the Productivity Environmental Survey. Results of *t* tests revealed significant differences

between developmental and nondevelopmental subjects for the learning style variables of field dependence, fact and principle in social studies and mathematics, learning in the afternoon, sound present during learning, motivation, and mobility. Discriminant analyses revealed that field-dependence/independence, as measured on the GEFT, was the single best discriminator between developmental and nondevelopmental students.

## IV-18 Readability and legibility

ANDERSON, THOMAS H., & ARMBRUSTER, BONNIE B. (1986). Readable textbooks, or, selecting a textbook is not like buying a pair of shoes. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 151-162). Hillsdale, NJ: Erlbaum.

Presents a brief history of research in readability and reviews research on text variables under the two major headings of global coherence and local coherence. Good and poor examples from actual textbooks are given as illustrations. The authors contend that readability measures are not highly useful and discuss new work on text variables that may help in understanding textbooks.

GRAVES, MICHAEL F.; PRENN, MAUREEN C.; EARLE, JASON; THOMPSON, MARY; JOHNSON, VIVIAN; & SLATER, WAYNE H. (1991). Improving instructional text: Some lessons learned. *Reading Research Quarterly, 26*, 110-122.

Reports a replication of an earlier study to attempt to explain contradictions other independent researchers had found when they tried to replicate design procedures. Different outcomes were found using the procedures and modifications of the independent researchers. Subjects were 18 eleventh graders from a middle-class suburban high school. Materials included four versions of two texts, six short-answer questions for each passage, and an attitude survey. Passage versions were the texts of the original study and the second revision of those passages by the composition instructors, text linguists, and *Time-Life* writers. The study was conducted over two consecutive days, with students receiving the materials, reading the passage, and writing their recalls on the first day, and completing a delayed recall, the short-answer quiz, and the attitude survey on the second day. Propositional analyses were used to score recalls. Composition instructors' revisions produced the most recall, and the text linguists' version produced the least. More propositions and a greater proportion of propositions were recalled by students reading the composition instructors' versions than those of the text linguists or the *Time-Life* writers. The same patterns were present for delayed recall. Subjects who read the composition instructors' version scored higher on the short-answer quiz than did the students reading the *Time-Life* versions. Composition instructors' versions were also rated more favorably. Results did not replicate the original study but replicated the study done by the other independent researchers, although differences here were larger than in the independent study. The importance of replication and the fallibility of expert judgment are suggested by the results. Suggestions for improving textbook design are given.

LAINA, HO. (1991, December/1992, January). American teen books easier than British ones. *Journal of Reading, 35*, 324-327.

Determines the readability levels and conducts a syntactic check on 20 British and 20 American young adult novels which were frequently checked out of a Singapore library. Readability levels were established using the Dale-Chall formula and the Fry Readability Graph. Three 100-word samples were selected from each book. British books had higher

readability scores than did American books. Syntactic complexity was assessed by the Botel and Granowsky grammatical complexity formula. Five of the British books had high difficulty scores on the syntactic formula, while three American books scored as difficult.

VACHON, MYRA K., & HANEY, RICHARD E. (1991, April). A procedure for determining the level of abstraction of science reading material. *Journal of Research in Science Teaching, 28*, 343-352.

Reports the development of a method for scoring the level of abstraction (LOA) of science reading material, where level of abstraction is defined as the ratio of the nonconcrete concepts to the total number of concepts in a written passage, expressed as a percentage. Participants were 24 science educators, 60 science teachers, and 425 urban students in grades 5, 7, and 10. Data were collected by determining the readability levels of nine samples of textbook material, determining the tentative LOA scores of the passages and administering cloze tests over the passages to the students. Readability scores were determined by a computer program. LOA scores were determined by the science educators. A subgroup of 11 science teachers also made predictions of the levels of success students would have on the passages and administered the cloze tests. Agreement among teachers on the concepts of the LOA ranged from 87% to 92%. No significant correlation coefficients were found between passage LOA and passage readability level, between student cloze scores and passage LOA, between passage LOA and teacher prediction of student success, or between student cloze scores and passage readability level. The researchers suggest that LOA may be tapping different processes than the other procedures.

BEVER, THOMAS G.; JANDREAU, STEVEN; BURWELL, REBECCA; KAPLAN, RON; & ZAENEN, ANNIE. (1991, Winter). Spacing printed text to isolate major phrases improves readability. *Visible Language, 25*, 74-87.

Contrasts the effects of three kinds of spacing of linguistically based information (a hand constructed phrase structure analysis, a prosodic phrase analysis, and a "phrasetree" analysis) to determine the effect on passage readability as calculated by the Cook-Chapman Find-the-Odd-Word test in a paragraph version. Subjects were community college students, who read paragraphs under timed conditions and were instructed to strike out the odd word in each paragraph. There were eight experimental versions of format. Greatest advantage was found for the phrasetree materials, followed by the phrase structure materials. No advantage was found for the prosodic materials. For all subjects, phrasetree materials were read significantly better than even spaced format, phrase structure format, or prosodic materials. For low-scoring subjects, the phrasetree condition was significantly better than the even spaced condition. No significant differences were noted for the other two formats or for the high group for any formats. The researchers concluded that phrasetree materials are read more efficiently than standard right ragged formats.

CARMEAN, STEPHEN L., & REGETH, REBECCA A. (1990, December). Optimum level of visual contrast sensitivity for reading comprehension. *Perceptual and Motor Skills, 71*, 755-762.

Hypothesizes that a curvilinear relation exists between contrast sensitivity and ease of reading normal copy and tests the hypothesis by comparing elementary school children's contrast sensitivity with reading comprehension scores. Percentile scores on the reading comprehension section of the MAT were collected for 155 children in grades 2 to 6. Children were individually tested for visual contrast sensitivity using a test marketed as a professional diagnostic measure for optometrists and ophthalmologists. The results showed that both low and high sensitivity were associated with lower reading comprehension.

CORNELISSEN, PIERS; BRADLEY, LYNETTE; FOWLER, SUE; & STEIN, JOHN. (1991, September). What children see affects how they read. *Developmental Medicine and Child Neurology, 33*, 755-762.

Compares visually disabled and nonvisually disabled children as they read three lists of single real words matched for linguistic complexity. Subjects were screened to exclude orthoptic and ophthalmological pathology before completing the Dunlop Test, a test of how retinal information from both eyes is associated with oculomotor signals about eye position in the head. Subjects also were screened with the British Ability Scales and a four-word rhyme detection task. Lists read were printed in three conditions: 24 point, 12 point, and 9 point Helvetica fonts. Generally, children made more errors as print size was reduced. Most increases in errors occurred in children who failed the Dunlop Test when print size was changed from large to medium. Children who failed the Dunlop Test also showed a significant increase in the proportion of nonword errors with this switch in type size. Children who failed the Dunlop made fewer nonword errors than children who passed the Dunlop when they read large print, but they made more nonword errors with medium and small print. Results suggest a link between the efficiency of visual processing and reading accuracy.

JORNA, GERARD C., & SNYDER, HARRY L. (1991, August). Image quality determines differences in reading performance and perceived image quality with CRT and hard-copy displays. *Human Factors, 33*, 459-469.

Evaluates reading performance and subjective image quality on a soft-copy (CRT) and a hard copy (photograph) display with respect to physical image quality as measured in modulation transfer function area (MTFA) values. Each display type contained four levels of image quality created through the use of three filter conditions and a nonfilter condition. Font, visual angle, orientation, polarity, display luminance, and text layout were controlled for all conditions. The Tinker Speed of Reading Test was used to evaluate reading speed. Subjects, 16 college students, also completed a nine-point subjective rating scale of image quality after each reading task. As image quality of the display increased, reading speed and subjective image quality ratings increased for both hard copy and soft copy conditions. Results suggest that if image qualities are similar, hard copy and soft copy displays yield equivalent reading speeds, refuting earlier research suggesting that people read more slowly from cathode-ray tube displays than from hard copy.

## IV-19 Literacy acquisition

GOSWAMI, USHA, & BRYANT, PETER. (1990). Phonological skills and learning to read. Hillsdale, NJ: Erlbaum.

Reviews the research on the relation between children's phonological skills and the progress that they make in reading. The book begins with a discussion in Chapter 1 of phonological awareness and the different forms of this awareness. Other chapters present the research information on how children read words, spelling and phonological awareness, how children read and write new words, comparisons with backward readers and spellers, correlations and longitudinal predictions, teaching children about sounds, and do children learn to read in different ways from one another. A final chapter deals with theories about learning to read.

HUXFORD, LAURA; TERRELL, COLIN; & BRADLEY, LYNETTE. (1991, September). The relationship between the phonological strategies employed in reading and spelling. *Journal of Research in Reading, 14*, 99-105.

Reports on a longitudinal study of the relation between phonological strategies children use in early reading and spelling development. The 43 children serving as subjects were from reception classes in three English Primary Schools. At the inception of the study, most of the children were 4 or 5 years of age with a mean IQ of 99 for the group. Children were given a variety of measures throughout the year-long span of the study. Measures given at the start of the study enabled control for age, reading, spelling, alphabetic knowledge, IQ, memory, and hearing. Dependent measures given periodically throughout and at the culmination of the study assessed reading and spelling of 2- and 3-letter nonwords and real words, as well as phonological segmentation and blending ability. Mean scores for phonological spelling were consistently higher than mean scores for reading obtained on the same occasions. Correlated *t* tests performed on the difference between scores obtained on each occasion indicated phonological segmentation to be superior to phonological blending. Results support the notion that the ability to spell phonologically precedes the ability to read phonologically and that segmentation is easier than blending.

EHRI, LINNEA C., & SWEET, JENNIFER. (1991). Fingerpoint-reading of memorized text: What enables beginners to process the print? *Reading Research Quarterly, 26*, 442-462.

Reports an investigation of the kinds of print-related knowledge that emergent readers must possess in order to learn to point to the words of a text as they recite it from memory (fingerpoint-reading) and to remember information about the print from this activity. Thirty-six children whose ages ranged from 4.5 years to 5.8 years completed several pretests of reading skill assessing their letter knowledge and word reading abilities. Subjects then were introduced to fingerpoint-reading and practiced a simple text. Their reading capabilities were assessed using the final solo reading of the memorized text. In addition, six other tasks helped to determine each child's ability to read or recognize lines of text and target words. A follow-up phase of training attempted to teach the subjects phonemic segmentation. Although the subjects learned to recite the text, they were less able to point to the words in each line, and least able to match voice with print. Regression analyses, conducted with age, letter-name knowledge, preprimer word reading skill, letter discrimination, and two measures of phonemic segmentation serving as independent variables, revealed that different types of print knowledge were related to different aspects of fingerpoint-reading. Recognition of some preprimer words contributed to reading and locating individual words in text. Letter knowledge was important for noticing that letters in the text had been altered and for locating words in text. Phonemic segmentation contributed to the ability to point to a printed word and match words with voice recitation.

EHRI, LINNEA C., & ROBBINS, CLAUDIA. (1992). Beginners need some decoding skill to read words by analogy. *Reading Research Quarterly, 27*, 12-26.

Investigates whether reading words by analogy depends on decoding skill. Ability to read nonsense words was used to distinguish kindergarten and first grade decoders and nondecoders. Subjects were assigned randomly to one of two groups—an analogy condition or a control condition. All subjects were taught to read five English words and then were tested on five transfer words. The training words contained the same letters and sounds, but they were ordered differently. For the 48 analogy subjects, the transfer words shared rimes with the training words. For the 54 control group subjects, the transfer words shared only letter-sound correspondences. Subjects attempted to read the transfer words and then were given five trials with feedback to learn them. Performances were tested statistically using *t*-tests or Mann Whitney nonparametic tests. A 2-way ANOVA was conducted on scores across learning trials. Results indicated that only the decoders read any words by analogy. Nondecoders tended to misread new words as old words (using partial letter cues). Among decoders, anal-

ogy subjects read more transfer words than controls; blending onset and rime units appeared easier than blending phonemic units. It is suggested that beginners need some decoding skill to be sufficiently analytic about spellings to read words by analogy.

OLLIFF, CHARLEEN B. (1991, Winter). The beginning reader's concept of word: Implications for the classroom. *Reading Improvement, 28*, 249-254.

Reviews research exploring the beginning reader's acquisition and understanding of the metalinguistic concept of word. In general, the research evidence suggested that confusions are resolved through meaningful experiences with print structured to teach the vocabulary needed to benefit from formal instruction.

MEHARG, MARGARET R. (1992, Spring). Emergent reading. *The California Reader, 25*, 8-11.

Identifies research supporting the existence of stages in emergent reading. Also presents the theoretical basis for the whole language approach to reading instruction.

RIEBEN, LAURENCE, & SAADA-ROBERT, MADELON. (1991). Developmental patterns and individual differences in the word-search strategies of beginning readers. *Learning and Instruction, 1*, 67-87.

Presents the first results of a longitudinal program intended to explore the individual differences in written language acquisition strategies. Subjects were 21 beginning readers/writers (ages 5 to 6) attending a state school attached to a Swiss university. The sample included 11 kindergarten pupils and 10 first graders. All were nonreaders according to the results of initial reading tests (reading of texts, words, and pseudowords). Data were collected in classrooms during each of four observation periods that extended from November through May of one academic year. During each of the observation periods, the pupils were invited to produce a commentary based on their drawings, and they were provided with a reference text to aid their independent writing. Four reference texts were developed, and one was presented at each session. The focus of this study was the subjects' use of reference texts to identify and copy words in their writing. Observations were analyzed to detail the pupils' word-search strategies. Results showed that word-search strategies varied from those dependent on prior context knowledge to those linked to alphabetic knowledge. Strategies also were observed to appear concomitantly. It was found that children constructed and used certain strategies in a dominant way, and this dominance changed in the course of reading acquisition.

ROSKOS, K. (1991). An inventory of literate behavior in the pretend play episodes of eight preschoolers. *Reading Research and Instruction, 30*, 39-52.

Describes the development of an inventory used to document reading- and writing-like behaviors of eight preschoolers evidenced in their pretend play episodes. The eight subjects were enrolled in a preschool program that served 29 children who were considered typical of their age group in verbal ability (PPVT), language development (test of Early Language Development), health, home life, and school attendance. Over a 6-month period, three strategies were used to obtain data about literate behavior in the pretend play activity of the subjects: a series of ethnographic interviews, nonparticipant observation using videotaping, and the collection of literacy documents produced during play episodes either in the home or in the preschool. A four-step procedure was used to inventory the data. The videotapes were scanned for indicators of reading- and writing-like demonstrations; all instances of literate behavior were recorded and the instances of literacy were sorted into kinds of literate behavior. A matrix was applied for sorting literacy demonstrations and references into

domains of literacy activities, skills, and knowledge. Finally, the matrices were summarized into a basic scheme, or inventory scheme, of literate behaviors.

NEUMAN, SUSAN B., & ROSKOS, KATHY. (1991, June). Peers as literacy informants: A description of young children's literacy conversations in play. *Early Childhood Research Quarterly, 6,* 233-248.

Examines the influences of the social context on children's learning by describing the functions of preschoolers' literacy-based verbal exchanges in a print-enriched play environment. Following the collection of base-line play behaviors, the play settings in two preschool classrooms were reorganized and enriched with print materials and literacy-related props. Children's play behaviors were then recorded through extensive observations over a 2-month period. Evidence of literacy demonstrations, defined as instances of reading- or writing- like behaviors, rose sharply (from 1.5 to 2.8 demonstrations per 40 minutes). From the sustained literacy conversations that were videotaped, 67 literacy-related conversational episodes were isolated and subjected to content analysis. Three types of discourse about literacy were identified in the play context: children's conversations focused on designating the names of literacy-related objects, on negotiating meaning related to a literacy topic, and on coaching another child in some literacy task in order to achieve a goal in play. Results suggest that children's collaborative engagement in literacy through play may have an important influence on their developing understanding of written language.

LANDSMANN, LILIANA TOLCHINSKY. (1990). Literacy development and pedagogical implications: Evidence from the Hebrew system of writing. In Yetta M. Goodman (Ed.), *How children construct literacy: Piagetian perspectives* (pp. 26-44). Newark, DE: International Reading Association.

Describes children's concept of literacy constructed by them while interacting with, or engaged in, writing activities. Research projects conducted with preschool Israeli children were reviewed to detail the emergence of writing, the regulation of writing, and the representation of language in writing. Four implications for literacy development resulting from this body of research were detailed. The first suggested the presence of developmental regularities across orthographies. The second confirmed the relation between the spoken and written language and asserted that mastery of the spoken language would not be a prerequisite for fostering written language, but rather the two forms would interact from the beginning. The third related that children appear to attend to lexical morphemic levels of language from their very first involvement with reading and writing. The fourth implication supported the Piagetian concept of a hypothetical mechanism of development suggesting that children need to be provided with opportunities to confront and to reflect on their own writing and reading, to review what they do, to compare successive writings, and to contrast ideas about texts.

MCDONOUGH, KATHLEEN. (1992, Spring/Summer). Observations of first grade students' reading and writing. *Arizona Reading Journal, 20,* 82-85.

Reports observations and comparisons of the changes that occur over time in three 6-year-old children's reading and writing. The children were judged as High Progress (HP), Average Progress (AP), and Reading Recovery (RR). Each child was informally interviewed and observed in his or her classroom. In addition, a portfolio of writing samples was collected, as were "running records" of readings of self-selected text. Comparisons were also made on selected tasks from the Observation Survey completed in September and again in May of the first grade year. The RR child's Reading Recovery lessons were discontinued in February. At year's end, the RR pupil was functioning within the average to high average range in his class. His focus was on the construction of meaning in both reading and writing.

His teacher commented that he was helping other children with their reading and journal writing. In contrast, the AP pupil was not functioning within the average range. Her reading was word-by-word and without understanding. She appeared to lack the strategies to solve problems in text in a systematic way. The HP pupil became more fluent in both reading and writing over time. She constructed meaning in stories she read and in her journal entries. In a 10-minute writing vocabulary task from the Observation Survey, her writing vocabulary doubled (43/86) from fall to spring. The researcher indicates that although the RR pupil's progress was predictable based on similar studies, the AP pupil's failure to make average progress was unexpected.

WOLF, SHELBY ANNE. (1991, September). Following the trail of story. *Language Arts, 68*, 388-395.

Presents a selected aspect of a larger case study of one child's response to literature over time. The subject, who is the daughter of the author, was observed from 3.2 years to 7.5 years of age in various settings (mainly school and home). Data included audio and videotapes of story reading episodes, interviews with teachers and family members, as well as behavioral notes on her language and literacy development. Focus is placed on the child's developing response to the tale of Hansel and Gretel, as it was presented to her through several Grimm Brothers' editions. Compilation of the data suggest that the nature of the child's responses and interpretations changed over time and settings. At ages 3 and 4, understanding of the story was expressed through pantomime. At ages 5 and 6, actions became subdued as comments, questions, and hypotheses adhering more to the literal message of the text became more pronounced. By age 7, talk expanded to discussions which included logical explanations and assessments of characters' motivations and intentions based on life experiences.

HUDSON, JUDITH A., & SLACKMAN, ELIZABETH A. (1990, October/December). Children's use of scripts in inferential text processing. *Discourse Processes, 13*, 375-385.

Investigates developmental differences between preschool and first grade children's abilities to make various types of inferences. Subjects were 42 nursery school children and 41 first grade children enrolled in public and private nursery and elementary schools. Each child was seen individually and read three stories. After listening to each story, the child was asked to recall as much of the story as possible and to answer one script-based inference question and one text-based inference question. Script-based questions required inferences based on information represented in the listeners' event schemas. Text-based questions required inferences based on relations between story statements as opposed to event knowledge alone. Two types of text-based inferences were of interest: invited inferences, based primarily on general world knowledge, and logical inferences, based on conditional reasoning. Dependent variables were total number of statements recalled out of five, and total number of correct inferences in the script-based, invited, or logical categories. ANOVA procedures applied to the data showed first graders produced more inferences than preschoolers in all categories. Controlling for recall of relevant text information, preschoolers were better able to make script-based inferences than both invited and logical inferences. In comparison to preschoolers, first graders were better able to draw both script-based and invited inferences than logical inferences. Results support the notion that the development of children's knowledge base is related to the development of their ability to draw inferences. With regard to text comprehension, preschool children's event knowledge enables them to make script-based inferences prior to invited or logical inferences.

TOOMEY, DEREK, & SLOANE, JUDITH. (1991, February). Developing 'Emergent Literacy' for children of low socioeconomic status: A preschool program. *Australian Journal of Reading, 14*, 40-49.

Describes a project which examined the emergent literacy development of 79 low-SES children in four Australian preschools over a 6-month period. To encourage children's interest in books, the researchers regularly read to the children both individually and in small groups. In addition, books were sent home so that parents could read to their children twice a week. Home visits were used for families needing encouragement. During the last 7 weeks of the program, children were exposed to predictable books. Five such books were introduced, read aloud several times, and sent home with each child. Identical measures were used to evaluate the home backgrounds and literacy competencies of both project children and a comparison group of 36 families. In spite of some initial advantages for the comparison group, the project group demonstrated greater improvement on the posttest (Sulzby Test of Emergent Literacy). Children who participated in the project were much more inclined to be responding to print at the time of the posttest (58%), as compared with their pretest performances (3%).

BLOOMER, RICHARD H.; NORLANDER, KAY A.; & RICHARD, PATRICIA A. (1991). Short-term memory demands of initial reading curricula: Impact on progress in elementary school reading. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 187-202). Athens, GA: American Reading Forum.

Ascertains the short term memory (STM) capacity of first and second graders in relation to the short term memory requirements (STMR) of several beginning reading programs and later reading success. The subjects were from nine elementary schools and included 148 first graders and 193 second graders. Mean IQ for the sample was 103.1. The Visual Sequential Memory Task (a subtest of the Bloomer Learning Test) was used to assess pupils' ability to remember a sequence of letters and words after brief exposure. Results of this test indicated that successful immediate recall of letters and words is dependent on the size of the recall task and the maturity of the learner. First and second graders have a much larger memory capacity for letters than for words, with second graders having a greater capacity developmentally. The average number of words remembered by first graders is less than one, suggesting that first graders will have difficulty holding a single word in STM for processing and may require multiple exposures for learning. Differences were found among four beginning reading programs for the number of stimuli introduced in a lesson. Analysis at the end of the first grade indicated that children who were taught to read with letter-sound correspondence were superior to children taught by word/story method in the identification of letters. Records taken from all children in the sixth grade suggest that reading programs which require less STMR reduce but do not eliminate reading problems.

## IV-20 Studies on the reading process

STRAW, STANLEY B., & SADOWY, PAT. (1990). Dynamics of communication: Transmission, translation, and interaction in reading comprehension. In Deanne Bogdan, & Stanley B. Straw (Eds.), *Beyond communication: Reading comprehension and criticism* (pp. 21-47). Portsmouth, NH: Heinemann.

Traces the dominant concepts of reading from the late 18th century through the development of interactive models in the late 1970s and early 1980s. The earliest concept of reading discussed is one of transmission. In the transmission model, meaning and authority

resided with the author while the reader was seen as a passive recipient of the author's meaning. A good reader was one who could recognize and/or apprehend the author's intent. If meaning was unclear, it was the reader's fault. In the late 19th century, with the interest of psychologists in reading and in the skills brought to the reading act, the concept of reading changed. Now the dominance of the author was overshadowed by the dominance of the text, and reading was seen as translation rather than transmission. A change in the content of children's readers occurred from religious intentions to a literary emphasis. The reader was no longer seen as a passive receiver but as a translator of text into meaning and was active in figuring out the meaning of the text. The meaning of the passage was held to reside in its constituent words. The reader's task was to break the code, thereby finding the meaning that was hidden within the text. More recently, the concept of reading broadened to include interaction as a primary tenet of the reading process. Reading is viewed as an interaction among reader, author, and text. Interaction notions see meaning as being molded in light of reader background and knowledge, suggesting that the author and reader share knowledge and experience and that these are shared via the structures of the text. Two general categories of interactive theories are discussed: psycholinguistic models and interactive-compensatory models.

CARPENTER, PATRICIA A., & JUST, MARCEL ADAM. (1986). Cognitive processes in reading. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 11-29). Hillsdale, NJ: Erlbaum.

Reviews research on cognitive processes in reading with a focus on four areas: perceptual processes, comprehension processes, theoretical models of reading, and individual differences. Within each area, some of the research issues are presented, main themes are summarized, and suggestions for future research are presented.

GUTHRIE, JOHN T.; BRITTEN, TRACY; & BARKER, K. GEORGENE. (1991). Roles of document structure, cognitive strategy, and awareness in searching for information. *Reading Research Quarterly, 26*, 300-324.

Examines, in two studies, the process by which readers locate information in written documents. Study 1 presents 26 undergraduate psychology majors who were asked to search for information as it was displayed in three document formats (a table, a directory, and a prose format) on a personal computer with an internal clock and an Infowindow. The table and the directory each displayed the same information in two marked categories (rows and columns for the table, and headings and subheadings for the directory), while the prose format presented the information in two paragraphs. As a document was shown on the Infowindow, questions requiring location of information were asked of the subject. Using a minimenu displayed on the bottom of the screen, subjects were able to take notes based on the following options: review the question, review notes, answer the question, and quit. The computer recorded the time each subject took to examine the screen, as well as each time a marked category or notetaking option was chosen. Data were assigned to one of four search process classifications: goal formation, category selection, extraction of information, and sequencing. MANOVA results indicated subjects were significantly more selective in their searches when documents contained a greater number of marked category options. They also spent proportionally more time on category selection and less time on extraction when searching the table or the directory than when searching the prose format. Subjects were equally discerning in their inspections of the table and directory, even though the information was organized differently. Subjects who had effective category selection strategies did so at a faster rate and with greater accuracy than students who had exhaustive or erratic strategies. Study 2 explored when and how students integrate information during document search. Subjects were 25 undergraduate psychology students who were asked to give "think

aloud" reports as they completed search tasks using a table and a directory. Analysis of computer synchronized recordings of think aloud reports with time spent inspecting each display indicated that subjects with efficient and exhaustive strategies were more aware of process than were subjects with erratic strategies.

NEUMAN, SUSAN B. (1992, Spring). Is learning from media distinctive? Examining children's inferencing strategies. *American Educational Research Journal, 29*, 119-140.

Reports two studies designed to analyze the influence of media on children's interpretation of stories. Study 1 presents a case study of two fifth graders as they did think alouds while reading and viewing episodes from two mysteries on public television programming. Judges analyzed the different strategies used when the children were inferencing from print and from videos. Study 2 examined the use of strategies by 42 high and 41 low achievers in fifth grade and whether their strategies differed across media presentation. Approximately half of each group was assigned to either view or read the same two stories as in Study 1 and asked to report on their predictions and thoughts. Subjects reported on six episodes in each story. Protocols were analyzed for inferencing strategies. A similar pattern of inferencing strategies appeared to be used for both print and media forms, and both high and low achievers seemed to use comparable strategies.

SMITH, MICHAEL W. (1991, May-June). Constructing meaning from text: An analysis of ninth-grade reader responses. *Journal of Educational Research, 84*, 263-271.

Studies the cognitive processes of five successful and five less successful ninth graders as they read two narrative texts and thought-aloud about what they read. Specifically, the study investigated the orientations toward reading of the subjects, the effects of the type of story on the responses, and if there were differences in the responses of the successful and less successful readers. Data revealed that students were primarily story-driven readers, rather than information- or point-driven readers. Differences between the two stories had little effect on the students' responses. No significant differences were found between the successful and less successful readers, although successful readers used more processes than did less successful readers. Successful readers also made more personal responses and used more personal experiences to understand the text. Less successful readers had a higher proportion of responses in the inferencing category than did the successful readers.

WHITNEY, PAUL; RITCHIE, BILL G.; & CLARK, MATTHEW B. (1991, April-June). Working-memory capacity and the use of elaborative inferences in text comprehension. *Discourse Processes, 14*, 133-145.

Determines if individual differences in working memory capacity are related to the ways readers use inferences to facilitate text comprehension. Subjects were university students enrolled in introductory psychology classes who scored either high or low on a measure of working memory span. Participants read six passages, an event at a time, and performed thinking-out-loud protocols of their emerging interpretations. Tapes were transcribed and divided into idea units representing simple sentences. Proportion of specific elaborations by the lower-span readers was double that of the higher-span readers. No other contrasts were significant. Interaction between span and passage did not approach significance, suggesting that span effects were consistent across passages. Patterns indicated that high-span readers keep a few open-ended thematic interpretations in memory and test them across successive portions of the text. Low-span readers may commit to a single early interpretation or interpret each event in a specific, isolated way. High-span readers made most of their elaborations in the last third of their protocols, suggesting that they may be using a

hypothesis-testing reading strategy. Additional data suggested that low-span readers fell into two clusters, those that made a few overall thematic interpretations and those that made large numbers of inferences.

SADOSKI, MARK; GOETZ, ERNEST T.; OLIVAREZ, ARTURO, JR.; LEE, SHARON; & ROBERTS, NANCY M. (1990, March). Imagination in story reading: The role of imagery, verbal recall, story analysis, and processing levels. *Journal of Reading Behavior, 22*, 55-70.

Examines the relation between verbal recall and spontaneously occurring imagery in reading a complete literary text. Aspects of the study addressed the relation between imagery categories and verbal categories in both immediate and delayed conditions, the relation between imagery and story structure, and the effects of different processing instructions on recall and imagery. Five intact classes of community college students served as subjects. All scored above the 20th percentile on the SDRT. All students read one 2,100 word text excerpted from a novel for young adults. Immediately after reading and again 48 hours later students were asked to provide written free recalls and written and enumerated imagery reports. Imagery reports were classified into categories of recall taken from the text comprehension and memory literature. Bivariate correlation analyses revealed no high coefficients and few moderate coefficients between verbal recall and imagery reports, suggesting separate systems. A factor analysis performed on the immediate data matrix indicated that three of the four significant factors received their highest loadings from imagery variables. Total verbal recall declined over the retention interval; imagery did not. Experimental instructions designed to manipulate process depth in an externally valid fashion did not result in significant differences in imagery reporting and recall. Other results indicated that a significant relation existed between imaging a story segment and the story grammar macrostructure of that segment.

KLETZIEN, SHARON BENGE. (1992, June). Proficient and less proficient comprehenders' strategy use for different top-level structures. *Journal of Reading Behavior, 24*, 191-215.

Compares comprehension strategies used by readers of two proficiency levels as they read passages with different top-level structures. Twenty-four tenth and eleventh graders of average ability participated in the study. Results of the CTBS reading comprehension subtest were used to separate proficient from less proficient comprehenders. Subjects read three expository passages with different top-level structures: collection, causation, and comparison. Passages used by proficient comprehenders had tenth and eleventh grade readability levels. These were rewritten to a ninth grade readability level for less proficient comprehenders. The same 12 context dependent nouns and verbs were deleted from each version of each passage and replaced by blanks. As subjects read each cloze passage designed for their group, they were required to provide an exact word or synonym replacement for each deletion and to tell what they did to decide on what word to put in the blank. The numbers of correct and incorrect responses for each passage for each group were totaled. Self-report responses were classified into 12 strategy categories, and the total number of times each strategy was used for each passage for each group was calculated. Repeated measures of ANOVA on cloze responses supported the assumption that the three passages were of equal difficulty and the same relative difficulty for the two groups. Both groups used similar strategies: reading, prior knowledge, inference, reading subsequent text, utilizing author's structure, relating the main idea, and focusing on key vocabulary. Strategies most often used by proficient comprehenders were use of inferences on the collection passage and use of author's structure on the causation passage. Differences observed between proficient and

less proficient comprehenders were use of prior knowledge on the collection passage and use of vocabulary on the causation and comparison passages.

O'BRIEN, EDWARD J., & ALBRECHT, JASON E. (1991 January). The role of context in accessing antecedents in text. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 94-102.

Conducts five experiments examining the type of information in the representation of a passage that may be activated during a search for antecedent information. Subjects were between 30 and 80 undergraduates receiving course credit for participation. In Experiment 1, a series of 20 pairs of passages were prepared, each containing a target antecedent in the second sentence. For each passage there were two possible antecedents. In the high-context version, one antecedent was highly related to the general context and the other was less related; in the low-context version, neither antecedent was highly related to the general context of the passage. Following a prompting reinstatement of the target antecedent, subjects were asked to name either the target antecedent or the alternative concept. Time to name either of the preceding, time to respond to a comprehension question, and time to read the final line of each passage (passages were presented a line at a time on a computer screen) were recorded. Reading times did not differ as a function of antecedent type for either type passage. Context was found to influence the activation level of antecedents. Time to name high related concepts was faster in the high context than in the lower context passages, both when the related concept was the target and when it was an alternative concept. It was felt that findings demonstrated that, with supporting context, concepts not present in the presentation of a passage become active during an antecedent search. In Experiment 2, results confirmed that the activation of concepts occurred during reinstatement. Experiment 3 demonstrated that if the activation of these concepts is high enough, readers may infer and incorrectly retrieve these concepts instead of the correct concept. The final two experiments confirmed that inferencing of the concepts occurred during retrieval and not during initial reading of the passage.

DANEMAN, MEREDITH, & STAINTON, MURRAY. (1991, July). Phonological recoding in silent reading. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 4*, 618-632.

Examines the use of phonological codes by fluent adult readers during silent reading of natural text. Subjects for the four experiments were University of Toronto undergraduates. In Experiment 1, subjects read a story while proofreading it for homophonic error words and nonhomophonic error words. Prior to engaging in the proofreading task, half the subjects read an error free version of the text, and half did not. Data consisted of the number of error words detected during the proofreading task, as well as performance scores on a speeded version of the Nelson-Denny Comprehension Test and a homophone spelling test. Performance on the proofreading task was significantly related to performance in reading comprehension, with good readers outperforming poor readers only when exposed to an error free version first. Almost perfect performance on the homophone spelling test suggested that any difficulty detecting homophonic errors did not stem from poor spelling ability. Results of Experiment 1 support the notion that phonological processes occur during silent reading. Experiment 2 sought to separate two potential sources for the homophonic confusion effect observed in Experiment 1. Using the materials and procedures of the familiarized condition in Experiment 1, subjects performed the task in two conditions which would interfere with maintenance of phonological codes in memory, but not with generation of phonological codes during lexical access. Results showed that the homophonic effect observed in Experiment 1 was persistent even under memory interfering conditions. Experiment 3 investigated if exposure to interfering homophones produced the confusion effect. Subjects read

an error free version of the passage that contained synonyms for the correct homophones instead of the homophones themselves. Results of the proofreading tasks ruled out word-specific-priming as an explanation for the homophone confusion effect. Combined results of Experiments 2 and 3 suggested that phonological codes are activated during lexical access. Experiment 4 examined the facilitative role of homophones. Findings showed that although homophony interfered with initial detection of inconsistent words, it did facilitate recovery of correct solutions.

ENDRES-NIGGEMEYER, BRIGITTE; WAUMANS, WIM; & YAMASHITA, HITOSHI. (1991). Modeling summary writing by introspection: A small-scale demonstrative study. *Text, 11*, 523-552.

Studies think-aloud protocols of three individuals as they summarized written text. Subjects were from Germany, Japan, and Belgium, all three taking part in a seminar at Duisburg University. All had been academically trained in their native country. Each subject contributed a think-aloud protocol while drafting a summary of introductory material to a German Prologue textbook. Statements for each think-aloud protocol were transcribed and interpreted to describe strategies used during the summarization process. Strategy statements were classified into the following function categories: general inference, planning and control, knowledge acquisition, relevance assessment, meaning reduction, condensation, construction, and output. Strategies observed were similar for each of the subjects, although the extent to which each subject used a strategy varied.

HEGARTY, MARY; MAYER, RICHARD E.; & GREEN, CAROLYN E. (1992, March). Comprehension of arithmetic word problems: Evidence from students' eye fixations. *Journal of Educational Psychology, 84*, 76-84.

Investigates, through observations of eye fixations, students' response to inconsistency in arithmetic word problems. Subjects were 38 undergraduates who were asked to read arithmetic word problems containing relational terms that were consistent or inconsistent with the required arithmetic operation. The problems were presented on a computer monitor and subjects' eye fixations were monitored and recorded on videotape. The videotapes also provided audiorecordings of subjects' verbal statements of the solution plan. Dependent variables were: (1) the number of reversal errors made in solving problems, (2) the overall time in reading and solving the problem, (3) the time required from the beginning to the end of the first series of eye fixations involved in the initial reading of the problem, and (4) the integration and planning time (i.e. the time from the end of the first series of eye fixations to the oral statement of the solution plan). A series of ANOVA procedures applied to the data revealed low accuracy students made significantly fewer reversal errors on consistent problems than inconsistent ones. Inconsistent problems required significantly more time than did consistent problems. For high accuracy students, but not low accuracy students, additional time was spent in the integration and planning phases of the problem solving, rather than the initial reading of the problem or the execution phase.

FORTUNATO, IRENE; HECHT, DEBORAH; TITTLE, CAROL KEHR; & ALVAREZ, LAURA. (1991, December). *Arithmetic Teacher, 39*, 38-40.

Observes 165 seventh grade children from 23 classes as they solved a nonroutine coin problem in mathematics and then completed 21 metacognitive statements on the strategies that they did or did not use as they completed the task. Examples of statements and the implications of the statement choice are included.

LAM, AGNES S.L.; PERFETTI, CHARLES A.; & BELL, LAURA. (1991, September). Automatic phonetic transfer in bidialectal reading. *Applied Psycholinguistics, 12*, 299-311.

Studies phonetic activation as it occurs in bidialectal Chinese adults during the reading of Chinese nonalphabetic script. Subjects were 16 Chinese adults from Hong Kong who spoke in Cantonese as a first dialect (D1) and Mandarin as a second dialect (D2) and 16 Chinese adults from the republic of China (Taiwan) who spoke in Mandarin (D1) but not Cantonese. Subjects were mostly graduate students or staff members. Of interest was the comparative performance of the Hong Kong subjects in reading nonalphabetic characters in Cantonese (D1) and Mandarin (D2) and the comparative performance of the Hong Kong subjects reading Mandarin (D2) with the performance of the Taiwanese subjects reading Mandarin (D1). Subjects were asked to read silently pairs of Chinese word characters and to tell whether, in a given dialect, the two characters had the same or different pronunciations. Dependent measures of processing difficulty were: (1) the mean reaction time of subjects in the same/different task and (2) the percentage correct on the same/different decision. ANOVA with planned comparisons performed on the data supported the notion that automatic phonetic activation occurs in reading of Chinese ideographic script.

BISANZ, GAY; DAS, J.P.; VARNHAGEN, CONNIE K.; & HENDERSON, HELEN R. (1992, March). Structural components of reading time and recall for sentences in narratives: Exploring changes with age and reading ability. *Journal of Educational Psychology, 84*, 103-114.

Explores the reading process components that affect sentence reading time and recall in children. Four of the components studied were microstructure components (words, mean frequency of content words, propositions, and syntax), and four were macrostructure components (new argument nouns, causal relations, causal chains, and story grammar). The sample for the study consisted of 66 good readers and 46 poor readers distributed over grades 5 and 7. Subjects read seven two-episode narratives constructed according to a well accepted story grammar. Each sentence within each narrative was assigned a value for each of the eight components. Subjects read each narrative, one sentence at a time, at their own pace. After reading each complete narrative, they were asked to retell it keeping as close as possible to the text. Multiple regression techniques revealed that, for all subjects, microstructrue components, especially words and propositions, were predictive of reading time; the greater the number of components per sentence, the longer the reading time. At both grade levels, poor readers differed from good readers in that macrostructure components predicted poor readers' reading time. For example, more causal relations per sentence were associated with faster reading times for poor readers (but not good readers) once significant microstructure components had been partialed out. These findings provided correlational evidence of a possible compensatory role in reading macroprocesses. Analyses of recall data indicated that better sentence recall is associated with developmental change, but not individual differences in reading skill.

GARRISON, BRIGITTE M., & HYNDS, SUSAN. (1991, September). Evocation and reflection in the reading transaction: A comparison of proficient and less proficient readers. *Journal of Reading Behavior, 23*, 259-280.

Explores the responses of six proficient and less proficient college freshmen readers to determine the role that personal evocation and personal reflection play in the reading transactions they experience. Subjects read four short stories and wrote open-ended responses to each text. Proficient readers used emotional and personal experience to draw into the world of the text, whereas less proficient readers used their experiences to withdraw from the texts. Reader-focused reflections focused on characters and on the story as a whole, with

proficient readers integrating textual clues and prior knowledge. Less proficient readers seemed more resistant to accepting the texts on their own terms and failed to synthesize their textual information and their personal experiences in the reflections. Less proficient readers focused on global evaluations more often than did proficient readers and often engaged in emotionally charged reactions and commentary on their confusion over author techniques. Less proficient readers seemed to remain on the fringes of the reading act, evoking textual information and personal reminiscences, but failing to move beyond many of these evocations.

BEN-ZUR, HASIDA. (1989, September). Automatic and directed search processes in solving simple semantic-memory problems. *Memory & Cognition, 17*, 617-626.

Reports four experiments investigating the cognitive processes involved in simple semantic-memory problems. Experiments 1, 2, and 3 employed 32, 48, and 48 undergraduate university students, respectively, for whom the native tongue was Hebrew. Experiment 4 was a post hoc analysis of the results of Experiments 2 and 3. The 16 subjects in Experiment 1 were each assigned to either a complete-information or a no-information condition and presented with 48 slides containing two stimulus words with instructions to find a third word (solution) that, when coupled with each of the stimulus words, would give two commonly used word pairs. Results indicated that informing participants whether the solution constituted the first or the second element in the word pairs facilitated performance. Experiment 2 was essentially the same as Experiment 1 and indicated that the amount of information given on solution direction affects performance. Subjects in Experiment 3 were asked to produce word pairs containing one of the two stimulus words from the items used in Experiment 2. Solution production was aided by rehearsing the second stimulus word of the specific item. It was concluded that indirect priming from one stimulus word may facilitate solution production from a searched word. The relevance of the findings to two models for retrieval from semantic memory is discussed.

VITU, FRANÇOISE. (1991, July). The influence of parafoveal preprocessing and linguistic context on the optimal landing position effect. *Perception and Psychophysics, 50*, 58-75.

Conducts a study designed to test whether parafoveal preprocessing or linguistic context specific to the text reading position weakens the optimal landing position effect of the eye during text reading. Participants were twenty young adults, all native speakers of French. Two lists of 240 words were constructed, each containing 120 five-letter and 120 nine-letter words. Within each length, there were 60 low frequency and 60 high frequency words. Two lists of sentence primes were constructed, one containing sentences that permitted the corresponding test word to be predicted easily and the other containing neutral sentences that could induce a number of different words. Subjects viewed materials on a computer screen while their eye movements were recorded and were to decide whether the sentence formed by the sentence prime, the test word, and the sequence of remaining words corresponded to a semantically correct sentence. The findings indicated no effect of the two factors on the strength of the optimal landing position. However, it was noted that the two factors strongly affect the refixation probability when they are combined or when the presented word is high frequency. The findings are interpreted as indicating that the decision to refixate a word is not determined by a preestablished program based only on the eye's initial landing position in the word, but that it directly depends on the amount of word processing done at a given moment.

KODA, KEIKO. (1990, December). The use of L1 reading strategies in L2 reading. *Studies in Second Language Acquisition, 12*, 393-410.

Investigates first language (L1) orthographic influence on cognitive processing involved in second language (L2) reading. Using a fundamental unit of representation, three orthographic systems (i.e., alphabet, syllabary, and logography) were categorized into two types: morphography and phonography. Previous L1 reading research has suggested that different strategies are used for phonological recoding by morphographic and phonographic readers. A cross-linguistic sample of 62 adult L2 learners of English with contrasting L1 orthographic backgrounds (Arabic, Japanese, Spanish) as well as 21 native English speakers read passages describing the characteristics of imaginary fish or fictitious cocktails. In the experimental condition, Sanskrit symbols were used in place of the names of the fish and cocktails; in the control condition, pronounceable English nonsense words were substituted for the Sanskrit symbols. The results indicated that trading rate for phonographic readers (Arabic, Spanish, and English) is seriously impaired when essential phonological information is inaccessible. Similar phonological inaccessibility, in contrast, apparently does not affect the reading performance of Japanese, or morphographic, readers, demonstrating that phonological inaccessibility exerts differential effects on the reading process of phonographic and morphographic readers. In addition, L2 readers from different L1 orthographic backgrounds use their L1 strategies in reading English as an L2, verifying cognitive strategy transfer during L2 reading.

## IV-21 Comprehension research

STRAW, STANLEY B. (1990). Conceptualizations of communication in the history of literary theory: Readers apprehending texts and authors. In Deanne Bogdan & Stanley B. Straw (Eds.), *Beyond communication: Reading comprehension and criticism*, (pp. 49-66). Portsmouth, NH: Heinemann.

Draws parallels between the historical movements in literary critical theory and reading comprehension theory. Three periods of development in critical theory are traced: (1) an early concept of reading as transmission covering the period from when literary theory first appeared as a university subject to the beginnings of New Criticism in the 1920s, (2) reading as translation covering the formalist period of New Criticism, and (3) reading as interaction encompassing the structuralist through and the start of the poststructuralist period. In all three periods, there is a common concept that the purpose of reading is for communication. In the past 20 years, the underlying communicative assumption of reading has been questioned, while the role of the reader in the reading act has begun to be appreciated.

OAKHILL, JANE, & GARNHAM, ALAN. (1988). *Becoming a skilled reader*. Oxford, UK: Basil Blackwell Ltd.

Reviews the literature in a number of areas but with an emphasis on the research related to comprehension and on what the skilled reader is like. Various chapters review and synthesize studies on the skilled adult reader, language development beyond the age of five, learning to read words, and learning to understand text. An extensive reference list is appended.

FARR, ROGER; CAREY, ROBERT; & TONE, BRUCE. (1986). Recent theory and research into the reading process: Implications for reading assessment. In Judith Orasanu (Ed).), *Reading comprehension: From research to practice* (pp. 35-149). Hillsdale, NJ: Erlbaum.

Discusses the implications for assessment of recent advances in reading theory and text analysis research. A final section of the chapter includes questions and recommendations for implementing and extending the research in these areas.

DOLE, JANICE A.; DUFFY, GERALD G.; ROEHLER, LAURA R.; & PEARSON, P. DAVID. (1991, Summer). Moving from the old to the new: Research on reading comprehension instruction. *Review of Educational Research, 61*, 239-264.

Synthesizes research findings from the areas of comprehension processes, comprehension strategies, and teaching strategies and makes instructional recommendations based on the evidence. The review begins with a brief historical overview of the origins of the current comprehension curriculum. A current view of the reading process as an active construction of a model of text is presented and followed by a set of five comprehension strategies found to be effective: determining importance, summarizing information, drawing inferences, generating questions, and monitoring comprehension. Based on research findings, a current view of instruction and a guideline and framework for comprehension instruction are presented.

BECK, ISABEL L., & MCKEOWN, MARGARET G. (1986). Instructional research in reading: A retrospective. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 113-134). Hillsdale, NJ: Erlbaum.

Reviews reading research in the decade prior to the publication of this chapter with particular attention to its relevance for instruction. The chapter is organized around four topics: decoding and automaticity, background knowledge, text structure, and metacognition.

SAWYER, MARY H. (1991, September). A review of research in revising instructional text. *Journal of Reading Behavior, 23*, 307-333.

Reviews research in revising instructional text. The review is divided into five sections: readability, text structure, text interestingness, expert revisers' strategies, and readers' comprehension strategies. It is noted that each research area has focused on different aspects of instructional text. The author critiques the research for being limited by a simplistic view of reading, the use of experimentally contrived texts and contexts, and a dependency on recall as a measure of comprehension. A promising line of research has used readers' verbal protocols to attempt to study how readers comprehend difficult text. By researching readers' comprehension strategies and their conceptual understandings, successful revision strategies for improving text explanations of complex material have been identified.

BROWN, ANN L.; ARMBRUSTER, BONNIE B.; & BAKER, LINDA. (1986). The role of metacognition in reading and studying. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 49-75). Hillsdale, NJ: Erlbaum.

Reviews research in metacognition and reading under the following major headings: texts, tasks, strategies, and learner characteristics. The features of reading materials that influence comprehension and memory are reviewed under text. The section under task looks at the requirements of various tasks and purposes of reading encountered by learners in school. The strategies section reviews the activities learners engage in to understand and recall information from the text. Learner characteristics deals with factors such as ability, familiarity with the material, motivation, and other personal attributes and states influencing learning. A final section calls attention to critical issues for future research.

MONTAGUE, MARJORIE. (1992, April). The effects of cognitive and metacognitive strategy instruction on the mathematical problem solving of middle school students with learning disabilities. *Journal of Learning Disabilities, 25*, 230-248.

Explores the effects of cognitive and metacognitive strategy instruction on the mathematical problem solving of six middle school children previously identified as LD. Two subjects at each of sixth, seventh, and eighth grades were assigned randomly to one of two groups: a cognitive strategy group or a metacognitive strategy group. Both groups received a combination of the two strategies in a second phase of the study. Each subject received two levels of treatment, setting generalization, near and far temporal generalization, and retraining. Subjects were administered the Mathematical Problem Solving Assessment-Short Form as a pre-and posttest. Study duration was 4 months. Cognitive strategies taught were read, paraphrase, visualize, hypothesize, estimate, compute, and check. Metacognitive strategies associated with each cognitive process were say, ask, and check activities. Data were collected for number of correct problems solved and number of minutes required for test completion. Children learned some of the cognitive and metacognitive components of the strategy, articulated strategies used by good problem solvers during interviews, but did not maintain the strategies over time. Metacognitive strategy instruction appeared more significant than did cognitive strategy instruction for improving subjects' mathematical problem solving, but neither was sufficient independently. Sixth grade pupils performed less well than seventh and eight grade pupils.

SMITH, M. CECIL. (1991). Activating implicit theories of reading: A metacognitive approach. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 19-27). Pittsburg, KS: College Reading Association.

Determines whether activating implicit theories of reading influences the reading behaviors of eight undergraduate education majors (mean age of 20.6 years). Individuals were randomly assigned to two of three reading tasks: academic task-passage on astronomy or psychotherapy followed by five literal comprehension questions; leisure task-passage on mountains and the southwest followed by retelling; or work related task—finding various types of information in a catalog. Students were first asked to rate how knowledgeable they were about the topics they would be reading (test of prior knowledge) and then completed the reading task. Students were required to describe everything that they were thinking and doing as they attempted to complete the postreading task. After the first trial on the reading task, subjects were asked several questions designed to probe beliefs about skills typifying a good reader. Subjects then completed the second trial on the reading task. Contrary to expectations, accessing of subjects' implicit theories of reading failed to improve performance on different reading tasks, indicating that adequate general knowledge of good reading skills had no effect on their reading performance.

MCKEOWN, MARGARET G., & BECK, ISABEL L. (1990, Winter). The assessment and characterization of young learners' knowledge of a topic in history. *American Educational Research Journal, 27*, 688-726.

Characterizes pupils' knowledge of events leading to the American Revolution just before and a year after study of the topic in school in order to determine what needs to be taken into account, what needs to be emphasized, and what distinctions need to be drawn for instruction. Data were collected through eight-question interviews and analyses of semantic nets illustrating patterns of knowledge. Subjects were 35 fifth graders and 37 sixth graders attending a school in a middle class public school district. Data were analyzed qualitatively. Pupils' knowledge of the Revolutionary War and factors contributing to it was sparse. While sixth graders provided more correct information, they also provided much confused information. Many subjects had no response or very limited partial responses for several of the questions. Children demonstrated simple associations but lack of connected structures among the ideas and lack of flexibility in use of the concepts. The researchers conclude that

the amount and quality of prior knowledge must be a fundamental consideration in the development of instruction that builds on the character of the knowledge they already have.

WILSON, PAUL T., & ANDERSON, RICHARD C. (1986). What they don't know will hurt them: The role of prior knowledge in comprehension. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 31-48). Hillsdale, NJ: Erlbaum.

Summarizes almost a decade of research on the role of the reader's prior knowledge in comprehension. The review focuses on schema theory and reviews research under the following subtopics: how schemata operate, functions of schemata, text structure, and text content. Implications of the research findings are discussed.

SHAKIR, ABDULLAH, & FARGHAL, MOHAMMED. (1991). The activation of schemata in relation to background knowledge and markedness. *Text, 11*, 201-221.

Studies the influence of background knowledge on activation of culture specific concepts (marked schemata) when reading ambiguous texts. Subjects were 21 American graduate students doing a course in Arabic as a foreign language, 19 instructors of English and English literature at the Language Center of Yarmouk University, and 26 English school teachers in Jordan. Subjects in each of the four groups were asked to read an ambiguous text and give up to three answers to each of two questions on the passage. Frequency counts of responses categorized according to type of activated schema were converted to percentages. Findings showed that, regardless of subjects' cultural background, most responses were generated by general or unmarked schemata and differed on those generated by culture-specific or marked schemata.

ALVERMANN, DONNA E., & HYND, CYNTHIA R. (November/December, 1989). Effects of prior knowledge activation modes and text structure on nonscience majors' comprehension of physics. *Journal of Educational Research, 83*, 97-102.

Assesses the effects of written directions to heed text that poses conflict between one's beliefs and what the text states. Also studied is whether refutation text (text that contrasts incorrect information with correct information) facilitates reading comprehension. Subjects were 22 nonscienced majors with known naive concepts of projectile motion. Subjects were randomly placed in one of six groups formed from three levels of prior knowledge activation and two levels of text. These groups included: (1) augmented activation-refutation, (2) activation-refutation, (3) nonactivation-refutation, (4) augmented activation-nonrefutation, (5) activation-nonrefutation, and (6) nonactivation-nonrefutation. Dependent measures included a short posttest consisting of five questions about information that was explicitly or implicitly stated in both the refutation and nonrefutation versions of the text, a true/false posttest, and a posttest application problem. MANOVA results indicated that the practice of activating competent readers' naive understandings of complex science structures and then explicitly directing them to focus on ideas that differ from their own was more beneficial than activating prior knowledge of a science structure alone.

GARNER, RUTH, & GILLINGHAM, MARK G. (1991, Summer). Topic knowledge, cognitive interest, and text recall: A microanalysis. *Journal of Experimental Education, 59*.

Explores arguments that cognitive interest in a descriptive text is determined by how much a reader knows about the topic of the text before beginning to read and that recall is related to level of cognitive interest. Thirty-six undergraduates were assigned to one of two conditions. Both involved reading a descriptive text, with the difference being the inclusion of seductive details in one paragraph of one condition. Subjects completed a topic knowl-

edge pretest of five questions, read the paragraphs, and rated each paragraph for importance and interest. After reading, subjects completed two recall measures, an open-ended recall, and short answer questions. Before reading, subjects had little information. While reading, subjects were moderately interested. After reading, participants recalled considerable information in both unstructured and structured recall situations. Recall did not differ significantly for those participants given the seductive details. Chi-square analysis suggested associations between knowledge and interest, knowledge and unstructured recall, interest and unstructured recall, and interest and structured recall. Cognitive interest in a descriptive text appears to be determined by how much a reader knows about the topic of the text.

MORRIS, CARL CRAIG. (1990, March). Retrieval processes underlying confidence in comprehension judgments. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*, 223-232.

Undertakes two experiments investigating the effects of manipulating the accessibility of information on confidence in the ability to answer questions about previously studied expository material. The 25 undergraduate students in Experiment 1 read a series of brief expository passages and then were to write a title for each. On the next day, subjects were shown titles, half of which were self-generated and half of which were generated by another subject, and asked to rate their confidence in the ability to answer an inference question based on the passage. Subjects were given 15 seconds, to tell whatever they could remember about each passage. Self-generated titles increased both confidence and recall production and reduced recall latency in comparison with other generated titles. Three groups of undergraduate students served as subjects for Experiment 2, including 25 in the confidence group, 21 in the retrieval group, and 21 in the familiarity group. The same expository passages were used as in Experiment 1, but the titles were given. On the first day, the passages were read. On the second day, subjects in all three groups were asked to give their confidence rating on each passage and then answered a true-false inference question on each. Subjects in the retrieval and familiarity groups completed a third task before giving the confidence rating and answering the inference question. The familiarity group was asked to rate their background knowledge about the topic, and the retrieval group was asked to read the title and inference assertion about each passage and then answer true or false on the basis of information in the passage. Three findings emerged from Experiment 2. First, marginal partial correlations of confidence and familiarity with retrieval indicated an underlying factor in addition to retrieval. Second, negative correlations of latency with magnitude in both confidence and familiarity ratings suggested that the ratings are influenced by access latency or instantaneous retrieval rate. Third, calibration of comprehension was poor but nonzero.

MCCORMICK, SANDRA. (1992). Disabled readers' erroneous responses to inferential comprehension questions: Description and analysis. *Reading Research Quarterly, 27*, 54-77.

Compares disabled readers' responses to literal and inferential questions, and assesses factors involved in erroneous responses to inference questions based on narrative and expository selections. Subjects were 80 children, ages 10 and 11, assigned to Chapter 1 classes. Over a 20-week period, subjects read as they listened to 13 narrative and 7 expository selections from second and third grade books. For each selection, pupils gave written answers to two literal and two inference questions. Answers to literal questions were rated as either right or wrong. Answers to inference questions were scored as: (1) incorrect if they were wild guesses, were unrelated to the question, contained illogical inferences, or were literal; (2) partially correct if a logical inference was drawn, but the response was clearly broad or narrow; and (3) correct if the response reflected inferences previously judged logical by the researcher. Erroneous inference responses were further analyzed for 26 sources of

errors within six categories describing task requirements necessary for responding to inference questions. Data analysis revealed that subjects made substantially more errors to inference questions as compared to literal questions. Regardless of passage genre, erroneous inference responses most often were attributable to subjects' lack of appropriate strategies for integrating text cues with background knowledge. Subjects often demonstrated an inability to write responses that accurately reflected their intended answers. Erroneous inference responses to narrative selections sometimes reflected problems with recall of important text information as well as with selection of correct signaling cues from texts and or questions. Erroneous inference responses to both narrative and expository texts often were unrelated to main points in the selections. For expository texts, erroneous inferences often were those that failed to reflect understanding of broader global constructs implicit in the texts.

GAMBRELL, LINDA B.; KOSKINEN, PATRICIA S.; & KAPINUS, BARBARA A. (1991, July/August). Retelling and the reading comprehension of proficient and less-proficient readers. *Journal of Educational Research, 86*, 356-362.

Studies whether practice in retelling improves retelling performance and reading comprehension of 24 proficient and 24 less-proficient readers. Subjects were 48 fourth graders who were selected based on achievement at the 20th percentile or above on the Cognitive Abilities Test. Subjects classified as proficient readers had attained a 68th percentile or higher on the CAT while those classified as less proficient had attained at the 41st percentile or lower. Subjects at each proficiency level were assigned to one of four story order conditions. Over four sessions, subjects in each condition silently read four stories and rendered free recalls of each. Additionally, measures of cued recall were obtained after the first and fourth readings. Analysis of free recall protocols and comparisons of first and fourth session cued recalls indicated that, for both groups, practice in retelling over four sessions results in significant increases in the number of propositions recalled, the proportional amount of story structure recalled, and the number of cued recall questions correctly answered. For both groups, also, practice in retelling yielded significant improvement in quality and quantity of retellings.

CASTEEL, MARK A., & SIMPSON, GREG B. (1991, September). Textual coherence and the development of inferential generation skills. *Journal of Research in Reading, 14*, 116-129.

Investigates developmental changes in the ability to draw forward and backward inferences. Also examined is the process of generating inferences. Participants in the study were a total of 120 subjects distributed over second, fifth, and eighth grade classes as well as undergraduate and graduate classes. Prior to initiating experimental procedures, each subject's reading speed was determined for use as a covariate in the analysis. The subject then read eight stories, each of which enabled two backward inferences (those crucial to comprehension) and two forward inferences (those not crucial to comprehension). Upon completion of each story, each subject answered questions assessing whether appropriate inferences had been made. Reaction time and response accuracy to each question were used to determine whether a particular type of inference was more apt to be made during encoding or retrieval. ANOVA and ANCOVA procedures applied to the data suggested that backward and forward inferences increase with age. Results at all grade levels also suggested that backward inferences are more apt to be drawn at encoding while forward inferences are apt to be drawn at retrieval.

OTERO, JOSE C., & CAMPANARIO, JUAN M. (1990, May). Comprehension evaluation and regulation in learning from science texts. *Journal of Research in Science Teaching, 27*, 447-460.

Assesses the extent to which comprehension is monitored by secondary school students reading science texts. Also explored are the strategies used to regulate comprehension when contradictions are noted in text. Subjects were 63 twelfth graders and 65 tenth graders from two public schools in Madrid, Spain. Subjects read six scientifically based passages, each comprised of six sentences. Four of the passages contained sentences that conflicted with each other. Students had to rate the comprehensibility of the passage using a four point scale ranging from easy to difficult, underline the conflicting sentences, and explain the nature of the contradiction. A follow-up questionnaire determined whether students who did not underline conflicting sentences had been cognizant of the contradicting information. These students were interviewed to determine their reasons for not underlining conflicting information. Also interviewed were students who did note the existence of inconsistencies within passages but who rated the comprehensibility of the passages as good or fairly good. Responses on the questionnaire was well as to interview questions were categorized as: (1) inadequate evaluation, (2) adequate evaluation/inadequate regulation, or (3) adequate evaluation/appropriate or quasiappropriate regulation. Statistical results indicated that twelfth graders outperformed tenth graders in contradiction detection and correct processing of text. Younger students were also found to have greater difficulties in the regulation phase of comprehension. Some incorrect/or inadequate regulatory strategies used by students are identified.

SMITH, THERESE F., & HAHN, AMOS L. (1989, June). Intermediate grade students' sensitivity to macrostructure intrusions. *Journal of Reading Behavior, 21*, 167-180.

Applies an error-detection paradigm to test readers' sensitivity to four top-level text structures. Subjects were 48 pupils enrolled in a private, suburban, middle class school at grade levels 4, 6, and 8 (n=16 at each level). They were identified as average readers on the basis of achievement test scores and teacher judgment. Two sets of expository paragraphs were generated to conform to four text structures: compare/contrast, description, enumeration, and sequence. Three of the paragraphs from each set contained a sentence which signaled an enumeration text structure (the intrusion). Following the reading of each paragraph, pupils performed a recall and a recognition task. Oral recalls were assessed qualitatively according to the following criteria: (1) followed the text's structure, (2) followed the text's structure but included the intrusion, (3) followed the text's structure and recognized the intrusive information, and (4) did not follow the text's structure. Similar criteria were employed for the pupils' performance on the recognition task. Results showed that task, text structure, and grade level differentially affected pupils' sensitivity to the four text structures.

GARNER, RUTH; GILLINGHAM, MARK G.; & WHITE, C. STEPHEN. (1989). Effects of "seductive details" on macroprocesssing and microprocessing in adults and children. *Cognition and Instruction, 6*, 41-57.

Examines, in two experiments, the effects of reading text which includes seductive details (propositions presenting interesting but irrelevant information) on recall of main idea and minor detail information as well as reports of information interestingness. The 20 graduates students in Experiment 1, who were deemed to be skilled readers, read expository texts containing seductive details or no seductive details. In both conditions, main ideas were minimally signaled. Following the reading, subjects were asked to tell just the really important information (the macroprocessing task), to rate the passage on a 5-point interestingness scale, to report the most interesting single piece of information read, and to match pictures of animals on the basis of differences mentioned in the text (the microprocessing task). ANOVA results indicated adults assigned to the seductive details condition were significantly less adept at recalling main ideas than were those assigned to the no seductive detail condition. There were no differences between conditions on interestingness ratings and other

microprocessing tasks. Experiment 2 was conducted with 36 seventh grade average readers attending a suburban private school. The subjects read expository texts with or without seductive details as in Experiment 1 and also without seductive details and lexical, graphic, and semantic signaling (maximal signaling) of main ideas. ANOVA results once again indicated subjects assigned to the seductive detail condition were less adept at macroprocessing tasks than subjects assigned to the no seductive details conditions. The seventh graders were also negatively affected in the microprocessing task when seductive details were present in the text.

KONOPAK, BONNIE, & MEALEY, DONNA. (1991, Fall). The role of imagery in processing literary and expository text. *Reading: Exploration and Discovery, 14*, 27-31.

Reviews research studies investigating the role of imagery with literary and expository text. Results of various studies provide evidence that imagery can facilitate comprehension and recall of written information.

OAKHILL, JANE, & PATEL, SIMA. (1991, September). Can imagery training help children who have comprehension problems? *Journal of Research in Reading, 14*, 106-115.

Explores the effects of mental imagery training on children's abilities to recall different types of information. Subjects were 192 children, ages 9 and 10, enrolled in three junior schools. Subjects were divided into experimental and control groups of good and poor comprehenders on the basis of their listening comprehension performance as adapted from passages on the NARA. All four groups were equivalent on vocabulary and decoding skills according to their performance on an adapted version of the GMRT Vocabulary subtest. Pupils in the experimental groups were given three separate imagery training sessions of 20 to 30 minutes each, while control groups merely read and answered questions for equivalent time periods. All subjects then read and answered three types of questions (inference, descriptive, and factual) for each of five test passages. ANOVA procedures applied to the data resulted in three significant main effect findings. Good comprehenders answered significantly more comprehension questions than poor comprehenders. Children given imagery training outperformed children in the control groups. However, while poor comprehenders given imagery training showed significant improvement in passage memory over the control group of poor comprehenders, there was no difference between the performances of the experimental and control groups of good comprehenders.

WALCZYK, JEFFREY J., & RASKA, LAURA J. (1992, January). The relation between low- and high-level reading skills in children. *Contemporary Educational Psychology, 17*, 38-46.

Replicates and extends earlier work to determine the relation between measures of low level reading efficiency and high level comprehension. Subjects, 124 children from second through sixth grades attending a university lab school, were tested on timed measures of decoding, semantic memory access, and verbal working memory span. They were also tested on higher level comprehension outcomes of error detecting, inferences, and the number of spontaneous inferences made while recalling story materials. Data were compared with percentiles from the reading subtest of the ITBS. Reading inferencing and working memory tests were group administered, while all other tasks were individually administered in random order. Significant differences in performance were observed across grades. For second grade, naming and semantic access latency scores were moderately correlated with each other but were not correlated with working memory, ITBS, or the comprehension measures. Working memory span was correlated with error detection, reading inferencing, and ITBS

scores. Error detection was correlated with reading and recall inferencing. Fourth and sixth grade correlational structures were similar to second grade patterns. High level comprehension was not dependent on the efficiency of lexical access processes across grade levels. Verbal working memory span was important in high level comprehension. The researchers concluded that the data support both dependence and independence views of the relation of the low and high level skills.

BEACH, RICHARD. (1990). The creative development of meaning: Using autobiographical experiences to interpret literature. In Deanne Bogdan, & Stanley B. Straw (Eds.), *Beyond communication: Reading comprehension and criticism* (pp. 211-235). Portsmouth, NH: Heinemann.

Reviews briefly theory and research on literary responses and reading comprehension and presents data on the analysis of journal entries from 49 preservice and inservice teachers who responded to one poem and four stories. Entries were analyzed for response strategies, level of interpretation, degree of experience elaboration, and the types of links used in connecting the texts with personal experiences. Response strategies involved the percentage of t-units in each of several categories. Across all texts, 39% of t-units were categorized as interpreting, 23% as connecting (autobiographical experience), 15% as engaging, 18% as describing, and 5% as judging. Correlational analyses revealed that the degree of engagement with a text was related to the degree to which subjects described the text and cited experiences that were related. The extent to which subjects elaborated on their experience was found to be related to the level of interpretation. Presented also are selections from various entries that illustrate successful and unsuccessful attempts of subjects to move back and forth between the text and personal experience, using one to reflect off the other. It is felt that a major implication from the study is that autobiographical response is related to enhanced interpretation. Suggestions and implications for instruction are presented.

ACKERMAN BRIAN P., & JACKSON, MEGAN. (1991, August). When is a guess a guess: Children's sensitivity to inference constraint in assessing understanding of story information. *Journal of Experimental Child Psychology, 52*, 117-146.

Reports four experiments designed to determine the relation between inference constraint and understanding of story information among readers of varying ages. Each experiment included subjects from second grade, fourth grade, and college. Experiments 1 and 2 focused on encoding X retrieval interactions in constraining causal inferences. Constraint was varied by manipulating concept accessibility at encoding and inference probes at retrieval. Understanding was probed by a rating question that followed the inference probes. Experiment 3 focused more on the temporal and causal relation between monitoring processes and causal inferences by varying the placement of the understanding question before and after the inference question and instructions to guess. Experiment 4 determined the relation between comprehension monitoring and text monitoring. Results of these experiments revealed that second graders were competent in assessing understanding, that marked differences were observed between grade level readers in dealing with uncertainty, and that contrasting patterns of performance for children in evaluating understanding and story adequacy were apparent. The results further suggested that comprehension monitoring and text monitoring should be distinguished empirically and theoretically.

ACKERMAN, BRIAN P.; PAINE, JODI; & SILVER, DARA. (1991, May). Building a story representation: The effects of early concept prominence on late causal inferences by children. *Developmental Psychology, 27*, 370-380.

Details the procedures and findings of four experiments assessing how processes involved in establishing the prominence of a concept early in a story influence the later use

of the concept by readers in making causal inferences. Subjects in these experiments included second graders, fourth graders, and college students. In Experiments 1 and 2, subjects listened to stories containing an early goal sentence and a later inconsistent outcome; then they answered a question about the reason for the inconsistency. The early prominence of a focal object was varied by manipulating story titles and the number of context sentences that preceded the goal sentence. Later object inferences varied with context sentence and title for all grade levels. The dependence on the early information seemed to decrease with grade. Experiment 3 established that the effects involved maintaining concept accessibility. Experiment 4 showed that the early prominence was critical. The results overall pointed out the importance of early structure building processes in representing story information.

EMERY, DONNA W. (1992, Spring). Children's understanding of story characters. *Reading Improvement, 29*, 2-9.

Investigates whether children's social understandings are reflected in age related differences in understandings of story character. Subjects were 135 fourth, fifth, and sixth graders and 50 college students from two elementary reading methods classes. Subjects read familiar and unfamiliar stories and answered open-ended questions requiring character understanding. Responses were given a rating of 1 if they referred to the immediate situation, or if only one character's point of view was involved; a rating of 2 if interpersonal relations were mentioned; and a rating of 3 if answers considered larger social contexts or referred to how one character perceived another character's feelings. ANOVA procedures applied to the data yielded findings supporting the notion that as children mature into adulthood, they tend to go beyond the immediate situation to consider larger contexts. Children emerge from considering only an individual character's perspectives to considering interpersonal relationships as well as how one character perceives another character's internal state. The findings were similar regardless of whether the story was familiar or unfamiliar.

NOLAN, THOMAS E. (1991, October). Self-questioning and prediction: Combining metacognitive strategies. *Journal of Reading, 35*, 132-138.

Combines two cognitive strategies, self-questioning and prediction, to determine if the combination results in higher comprehension scores when compared with a self-questioning strategy or a vocabulary-based intervention. A second purpose was to determine the effectiveness of self-questioning strategies for children reading below grade level. Passages were taken from commercial instructional materials. The SDRT was used to assess reading comprehension. Subjects were 42 sixth, seventh, and eighth graders whose reading comprehension ranged from 0.6 to 3.9 years below grade level on the GMRT. Pupils were matched and randomly assigned to one of three groups: self-questioning with prediction, self-questioning, and control vocabulary intervention. Each group received three 1-hour training sessions over a 3-week period. Children who used the combined strategy scored higher on the reading comprehension measure than did the other groups. The combined strategy produced the highest comprehension scores for pupils at all levels of reading ability, with greatest gains for lower level pupils.

SCHUNK, DALE H., & RICE, JO MARY. (1991, September). Learning goals and progress feedback during reading comprehension instruction. *Journal of Reading Behavior, 23*, 351-364.

Reports an experiment investigating the effects of goals and goal progress feedback on reading comprehension, self-efficacy, and skills. Subjects were 30 pupils from two fifth grade classes from lower middle class homes; 63% were Hispanic, 19% black, and 18% white. All were receiving remedial reading instruction. Each was pretested on comprehension self-efficacy and skill. The self-efficacy test assessed perceived capabilities for correct-

ly answering different types of questions tapping comprehension of main ideas. Materials were eight expository passages, each followed by one to four questions. Subjects judged their certainty of correctly answering the questions and then the 20-item comprehension skill test was given. Following the pretest, children were assigned randomly to one of three treatment conditions: product goal, process goal, or process goal plus progress feedback. All received daily treatment in a five-step comprehension strategy for 15 school days. Those in product goal conditions were reminded of the goal at the beginning of each session; process goal subjects were reminded of the steps at each session. Process goal plus progress feedback condition members received the process goal at the start of each session and progress feedback three to four times each session. All subjects received performance feedback. A posttest assessed perceived progress in learning the strategy. Results suggest that remedial readers benefit from having a goal of learning a strategy and receiving explicit feedback on their mastery of the strategy.

HYND, CYNTHIA R., & CHASE, NANCY D. (1991, September). The relation between text type, tone, and written response. *Journal of Reading Behavior, 23*, 281-306.

Studies the relation between text type (expository, narrative, and descriptive), tone (personal and impersonal), and readers' responses (reader-based and text-based) for 58 college freshmen enrolled in developmental reading courses. Subjects responded to a questionnaire designed to reflect their expectations about narrative, expository, and descriptive text types. They then answered eight specific questions about difficulty, enjoyment, and skills used when reading each text type and wrote how their reading was the same or different for each. Subjects took a pretest about the beginnings of suburban development and then read passages about suburbia written in the three text types and two tones. After reading, each wrote a response about their thoughts and reactions. The following day subjects took the same pretest as a posttest. Subjects indicated significant differences in difficulty, personal reaction, enjoyment, evaluation, and skills used in reading the three text types. No significant differences were found across tone or text type, as subjects wrote the same number of idea units after reading each passage. Subjects made more interpretive comments than any other type of comment, and statistically fewer evaluation comments. While subjects made more text-based comments overall, when they read descriptive text they made fewer text-based and more reader-based comments. Subjects who read text with an impersonal tone showed more improvement from pre- to posttest than did subjects who read text with a personal tone.

GERNSBACHER, MORTON ANN, & FAUST, MARK E. (1991, March). The mechanism of suppression: A component of general comprehension skill. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 17*, 245-262.

Investigates whether the cognitive mechanism of suppression underlies differences in adult comprehension skill. Five experiments compared the performance of skilled and less skilled comprehenders in ability to: (1) suppress the incorrect forms of homophones, (2) suppress information when viewing scenic arrays, (3) suppress information across modalities, (4) enhance the appropriate meanings of ambiguous words, and (5) enhance typical objects in scenic arrays. The subjects were U.S. Air Force recruits. All were high school graduates ranging in age from 17 to 23 years; approximately 18% were female. They were tested initially on the Multimedia Comprehension Battery, and results were used to identify more versus less skilled comprehenders. Results revealed that less skilled comprehenders rejected less efficiently the inappropriate meanings of ambiguous words, the incorrect forms of homophones, the typical but absent members of scenes, and words superimposed on pictures or pictures surrounding words. They exhibited a less efficient suppression mechanism. On the other hand, less skilled comprehenders were not less cognizant of what was contex-

tually appropriate and did not have difficulty enhancing contextually appropriate information.

DUSZAK, ANNA. (1991). Schematic and topical categories in news story reconstruction. *Text, 11*, 503-522.

Evaluates the linear organization of new schemata. Among the subjects were 25 students of English at the Institute of Applied Linguistics and the English Department of Warsaw University; 14 students of languages at the University College in London; and 29 first year students of language at Georgetown University, Washington, DC. The latter two groups contained only native speakers of English. The students were given a story text that had been cut into 11 individual paragraphs and told that the story had appeared in an English newspaper. The task was to assemble the paragraphs in an order in which they would expect them to appear in the original news story. Analysis of reconstructed narratives for dominant patterns in paragraph organization suggested preferred coherence strategies. Subjects attempted to organize text meaningfully according to natural and/or schematic factors. They also tended to do "repair work" on the linear arrangement of the story structure, minimizing discontinuity by opting for category clusters and thus continuous topical chains. Subjects showed preference for narrative forms of organization. The Americans, who seemingly took more liberty with positioning paragraphs in text, produced more news-like narrations in comparison to other groups. Results were thought to be attributable to matters of cultural immersion.

ZABRUCKY, KAREN, & MOORE, DEWAYNE. (1991, April/June). Effects of skill on standards used by younger and older adults to evaluate understanding. *Reading Psychology, 12*, 147-158.

Examines the use of different standards of evaluation in younger and older adults who were skilled or less skilled at evaluating their text understanding, using an error detection standard. Eight text passages were adapted from college level textbooks and were designed so that one sentence in each passage contained nonsense words, information inconsistent with prior knowledge (falsehoods), information that was internally inconsistent (inconsistencies), or was left intact. Two examples of each problem type and the intact version were counterbalanced over the eight passages, and versions and passages were randomly presented in booklets. These problem types were used to identify adults' use of lexical, external consistency and internal consistency standards of evaluation, respectively. Subjects were 51 young adults (mean age=23 years) and 50 older adults (mean age=69 years). Readers were judged as skilled if they identified three or more of the six errors within the eight passages; less skilled readers identified two or fewer errors. The effects of skill, age, and evaluation standard on error detection were examined in a mixed factorial least squares ANOVA. Skilled readers were more likely to detect falsehoods and inconsistencies during reading, while less skilled readers were more likely to detect nonsense words and falsehoods. Adults' educational level was positively related to their error detection performance, but their age was not. Results are discussed in terms of the development of standard use and effects of standard use on comprehension and memory.

SWANSON, H. LEE, & SCHOCK, JOANNE. (1991, October/December). Semantic and phonological coding processes in skilled and less skilled readers' reading of text. *Reading Psychology, 12*, 335-361.

Evaluates skilled and less skilled readers' use of semantic and phonological coding processes during reading. Subjects in Experiment 1 were 48 seventh graders. ITBS scores were used to identify 21 as skilled readers and 27 as less skilled. Subjects were asked to read several passages and make a lexical decision on an underlined letter string found in each

sentence. Letter strings were either synonyms, repeated words, or control words referring to items in the sentence. Subjects were later asked to recall words related to their lexical decisions, as well as to verify the occurrence of sentences from the passage. ANCOVA and ANOVA procedures applied to the data revealed skilled readers were superior to less skilled readers on recall of synonyms, but not on recall of repeated words, control words, or sentences. A different sample of seventh graders (25 skilled and 23 unskilled) served as subjects in Experiment 2. Experimental procedures approximated those used in Experiment 1, except that homophones replaced synonyms, and the sentence verification task included phrases related to the homophones. Data analysis revealed skilled readers to be superior to less skilled readers on recall of homophones and repeated words, but not control words. Skilled readers were more apt to be disrupted in correct verification of sentences with homophones than were less skilled readers. Findings of the two experiments suggest that both semantic and phonological coding are important components of the story reading process.

### IV-22 Research design

GUDMUNDSDOTTIR, SIGRUN. (1991, September/October). Ways of seeing are ways of knowing. The pedagogical content knowledge of an expert English teacher. *Journal of Curriculum Studies, 23*, 409-421.

Describes the pitfalls qualitative researchers may face when working without explicit theoretical frameworks and exemplifies this discussion with one researcher-made mistake in the case study of a high school English teacher. This research mistake was likened to the anthropological concepts emic and etic. The emic view represents the natives' perspective and the etic view constitutes the researchers' theoretical categories. In qualitative studies researchers need both. It was suggested that the best way to prevent such mistakes is triangulation. The author concluded that qualitative researchers must understand both the research process and the distinct phases of field work and interpretation.

## *V. The teaching of reading*

### V-1 Comparative studies

THORSTAD, G. (1991, November). The effect of orthography on the acquisition of literacy skills. *British Journal of Psychology, 82*, 527-537.

Studies the effects of the regularity of orthography on the acquisition of literacy skills among children learning to read and write in the phonologically predictable systems of Italian, the English initial teaching alphabet (i.t.a.), and the irregular system of English traditional orthography (t.o.). Subjects were 90 English pupils learning t.o., 33 English pupils learning the i.t.a., and 70 Italian pupils. They were matched for age and ability and ranged in age from 6 to 11. Reading and spelling skills were assessed using a 56-word passage taken from an Italian journal for adults and considered unfamiliar to all subjects. It was translated into English and found to be written at a level requiring a reading age of 13 years. All subjects were administered the passage both as a dictation test and as an oral reading task. Both within and across group differences were examined by establishing three age groups. Results revealed that the Italian children learned to read at an earlier age than did the English t.o. children, but not earlier than the English i.t.a. children. The English t.o. and i.t.a.

pupils could read more words than they could spell, whereas the Italian children could spell most of the words they could read and even some they could not read. The English children read fast and inaccurately, whereas the Italian children read slowly and accurately using a systematic, phonological strategy until age 10, when they read fast and accurately. All subjects used a phonological strategy in spelling, but the Italian pupils were most successful.

SARACHO, OLIVIA N., & GERSTL, CYNTHIA KOREN. (1992). Learning differences among at-risk minority students. In Hersholt C. Waxman, Judith Walker deFelix, James E. Anderson, & H. Prentice Baptiste, Jr. (Eds.), *Students at risk in at-risk schools: Improving environments for learning* (pp. 105-135). Newbury Park, CA: Corwin Press.

Reviews the research literature relative to learning style differences among ethnic and racial minorities. Argues that the literature suggests that ethnic minority students' academic performance may be affected by their learning style, and that, in turn, is influenced by their culturally induced cognitive style. Each culture produces different learning styles and aspects of perception and cognition behavior. Various ethnic groups differ concerning the respective cognitive style because they have different cultural histories, different adaptive approaches to reality, and different socialization practices. African Americans, Mexican Americans, Native Americans, and Asian Americans are discussed along with their cultural differences and learning styles.

## V-2 Status of reading instruction

CULLINAN, BERNICE E. (1991, Fall). These turbulent times. *Publishing Research Quarterly, 7,* 15-22.

Presents results of a survey of state departments of education to explore the status of literature-based programs. Results of this survey indicated that 9 states have statewide literacy/literature initiatives, 17 have statewide integrated language arts initiatives with a literature strand, 21 have no statewide initiative but have many local districts using literature-based programs, and 3 states reported continuing their basic skills programs.

POLING, S. NANCY. (1990, Fall). Is Indiana following the trend? A survey of literature in elementary school reading programs. *Indiana Reading Quarterly, 23,* 20-26.

Reports survey data from 39 of the 302 public school corporations in Indiana. In order to investigate the role of literature in Indiana elementary schools, personnel in charge of the corporations' reading programs were asked to describe their program as basal-managed, literature-based, individualized, teacher-choice, or other. Results indicated that 92% of those surveyed had basal-managed reading programs, 8% used literature-based programs, and 18% used basals in conjunction with literature-based programs. Most reported using the state curriculum guide, which recommends literature-based instruction, either alone (18%) or in conjunction with a corporation's own guide (82%). Types of materials and types of literature activities used by the corporations are summarized. Larger school corporations used more literature than did medium or small corporations. Medium corporations appeared to have the most conservative approach to incorporating literature into classroom instruction.

PRESTON, GLORIA J., & NICHOLSON, EVERETT W. (1990, Fall). Variations among middle school reading programs. *Indiana Reading Quarterly, 23,* 10-18.

Reports the results of a questionnaire sent to reading teachers and reading curriculum specialists/coordinators in junior highs and middle schools in Indiana to determine if these specialists uniformly used variety in (1) reading instructional program types, (2) reading instructional materials, and (3) student grouping for reading instruction. Responses were received from 190 individuals, 184 of whom reported formal reading programs were used in their schools. Data were analyzed in two groups: those reported by reading teachers and those reported by reading curriculum specialists or coordinators. A variety of combinations of remedial, developmental, and accelerated reading was reported by the schools, as was a variety of reading instructional materials. Most respondents reported using whole class, small group, and individualized grouping patterns, with whole class receiving the highest rankings of over 70% usage from both specialists and reading teachers.

JIPSON, JANICE, & PALEY, NICHOLAS. (1991, October). The selective tradition in teachers' choice of children's literature: Does it exist in the elementary classroom? *English Education, 23,* 148-159.

Explores the existence of a selective tradition in teachers' choices of literature for instructional purposes. Fifty-five female, elementary teachers from urban, suburban, and rural settings in Massachusetts (n=20), Wisconsin (n=17), and Oregon (n=18) were surveyed for this study. The average number of years of classroom experience was 12.5. They completed a questionnaire identifying the titles, authors, and main characters of 3 children's books they had used in their classrooms and provided the reasons for selecting each book. Titles and authors were counted; coding of reasons for selecting books was completed. One hundred and fifty-five books, representing 104 authors, were identified. Of these authors, 55% were male, and male authors accounted for 91% of the titles listed. Only 5 of the authors were ethnic minorities; 99 (95%) were of Euro-American heritage. Thirty-two were either information books without human characters (11), animal stories with main characters of undetermined sex (16), or poetry collections (5). Of the remaining books with identifiable main characters, the majority (65%) featured males. Only 6% included main characters from North American minority cultures. The coding of reasons for teachers' selections revealed 170 separate reasons for book choices. These were in three major categories: (1) the appropriateness of the text within a larger instructional context; (2) personal preference for the book because of the story, author, illustrations, or award-winning status; and (3) the recognition of gender, race, and ethnicity as important elements in the book selection process.

TULLEY, MICHAEL A. (1991, December). The effectiveness of one school district's basal reader selection process. *Reading Horizons, 32,* 96-108.

Examines the effectiveness of the basal reader selection process for one midwestern school district. One year after the adoption of a new basal reading program, 95 elementary teachers participated in weekly interviews over a 3-month period. Interview findings were later incorporated into a written survey to which 75 teachers responded. Teachers were asked what type of reading instruction they intended for their classrooms when they adopted the particular reading program they used and if they now believed that type of instruction was occurring in their classes. Four specific changes were assessed: less time on skills, more time on reading, more integration of skills, and higher quality of stories. Approximately 90% of all teachers reported that at least one of the four intended changes was occurring in their classrooms, while 25% believed that all four changes were occurring. Possible explanations for the discrepancies between plans and practice are given, as well as suggestions for avoiding similar difficulties in the future.

MCLAIN, K. VICTORIA. (1991, Fall). Metacognition in reading comprehension: What it is and strategies for instruction. *Reading Improvement, 28,* 169-172.

Reviews research on metacognition and comprehension in reading and describes fix-up strategies to be taught when comprehension failure occurs. Strategies suggested include reciprocal teaching, self-instruction and monitoring, look-back, QARS, K-W-L, and self-questioning.

GUZZETTI, BARBARA J.; SNYDER, TONJA E.; & GLASS, GENE V. (1992, May). Promoting conceptual change in science: Can texts be used effectively? *Journal of Reading, 35,* 642-649.

Integrates the findings of 23 studies examining the effects of text or text based strategies on students' misconceptions in science. With regard to the areas of science in which conceptual changes were examined, 57% of the studies investigated concepts from earth science, 17% examined concepts from life science, and 4% used a combination of areas. In all, the studies examined the effects of 25 variations of seven types of instructional strategies. Metaanalysis, used to synthesize the findings of the various studies, revealed some instructional strategies to be more effective than others in promoting conceptual change, with discussion webs, augmented activation activities, and use of refutational text proving to be most effective. Differential effects also were apparent among elementary, secondary, and undergraduate subjects in the various studies.

BROWN, REXFORD G. (1991). *Schools of thought: How the politics of literacy shape thinking in the classroom.* San Francisco, CA: Jossey-Bass.

Presents a series of case studies of schools and classrooms in which thinking and problem solving activities were purported to be a major part of the curriculum. A total of 650 hours of interviews and observations went into the case studies, with two-thirds of the time based on talking with teachers and visiting their classes. The interviews were informal in nature and attempted to learn what interviewees believed about students' capacities to think critically, solve problems, and become active, engaged learners. During classroom observations (primarily done in grades 3, 6, 8, and 11) nine general indicators of climate were looked for: physical environment, interaction between and among students and teacher, questioning strategies, amount of facilitation and probing, discussion elements, non-verbal indicators of engagement, courtesy and sensitivity, amount of reflection or self-regulation, and risk-taking environment. Chapters focus on different school settings. Chapters 1 and 2 deal with rural southern schools, chapter 3 with schools on an Indian reservation, and chapter 4 with schools in urban settings. Chapter 5 describes the contributions of a governor, a legislature, a state school board, and a district court judge to school policy environment. Chapters 6 and 7 deal with school districts in Pittsburgh, Pennsylvania, and Toronto, Ontario. The latter is described as the district with the most advanced form of literacy focusing on thinking and problem solving. Chapter 8 is a summary of the findings across all schools and districts visited. It is noted that in each school visited, someone was practicing thinking and problem solving skills with the students. However, in none of the districts studied in the United States was there a wide scale commitment to the kinds of activities that lead to these skills.

## V-3 Readiness

SCARBOROUGH, HOLLIS S.; DOBRICH, WANDA; & HAGER, MARIA. (1991, October). Preschool literacy experience and later reading achievement. *Journal of Learning Disabilities, 24,* 508-511.

Examines the relations of reported household literacy patterns to the reading abilities of adults and children. Subjects were 56 middle-class children and their 112 biological parents. The children were observed during their preschool years and followed up at the end of the second grade. All earned normal range IQ scores and none had visual, auditory, neurological, or emotional problems that might have impeded learning to read. During their children's preschool years, parents were asked about the frequencies of adult reading, parent-child reading, and children's solitary book activities in the home. Parental responses were compared for three groups of children defined according to the parents' reading skills (WJPB) and the children's reading achievement in grade 2. Results indicated that the 22 preschoolers who became poorer readers had less frequent early literacy-related experiences than the 34 children who became better readers.

PUTNAM, LILLIAN R. (1991, Fall). The growth of prediction abilities of kindergarten children from fall to spring. *Reading Instruction Journal, 34,* 5-12.

Seeks to describe the nature and growth of prediction abilities of kindergarten children over one academic year. Thirteen kindergarten classes in four suburban school districts participated in the study for a total of 201 children. In the fall and the spring, each child was presented a test story orally and invited to tell how he or she thought the story would end. The story selected was chosen because it had an interesting story line, the main character was an animal, and it had the potential for various endings. All responses were assigned to one of three categories: No Prediction, Convergent Prediction (sensible, expected solution), or Divergent Prediction (sensible, unexpected solution). Numbers and percentages of responses in each category were calculated. The largest percentage of children in any one category (40%) was in the Convergent group in the fall and again in the spring. The second largest percentage (27%) was in the No Prediction category in the fall and moved to Convergent Prediction in the spring. Nineteen percent were unable to make a prediction in either the fall or the spring. A Chi-square analysis revealed a significant difference between the distributions from fall to spring, with the number of No Predictions decreasing significantly. Pupils who gave predictions in the spring significantly increased their convergent responses. Readiness test scores (CAT) were available for 166 subjects and the relation between the test scores and predictions was examined for this subset. Analyses revealed that children who scored poorly on the CAT did as well on the measure of story predictions as did the high scorers. Examination of the CAT scores of children in the different categories of predictions showed a significant difference between only two categories: No Prediction in the fall or spring and Convergent Prediction both fall and spring, with the latter having the higher score.

BYRNE, BRIAN, & FIELDING-BARNSLEY, RUTH. (1991, December). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology, 83,* 451-455.

Evaluates a program designed to teach an aspect of phonemic awareness to young children. The experimental group of 64 preschoolers was trained with the program for 12 weeks, and the 62 controls (with equivalent mean PPVT and phonological awareness test scores) were exposed to the same materials stripped of reference to phonology. The complete battery of pretests included the PPVT and the Concepts about Print test, as well as tests of environmental sign recognition, letter-name and letter-sound knowledge, rhyme recognition, and initial and final phoneme identity. The latter tested phonemes that were and were not part of training. The training program emphasized recognition of like phonemes across words, and taught targeted phoneme in initial position followed by that phoneme in final position. None of the pretest measures reached significance. However, comparison of pretraining and posttraining measures of phonemic awareness showed greater gains by the

experimental group in comparison with controls. The increased levels of phonemic awareness occurred with untrained as well as trained sounds. A forced choice word recognition test showed that most of the children who possessed phonemic awareness and who knew relevant letter sounds could use their knowledge to decode unfamiliar printed words.

## V-4 Teaching reading—primary grades

CARLBURG, JOANNE J. CURRY, & ELLER, WILLIAM. (1992, Spring). Whole language learners: Are they acquiring word attack skills? *The Keystone Reader, 15,* 17-18.

Assesses the phonic skills of second grade children using the Pseudoword Phonics Test, an instrument designed by one of the authors. The measure includes 10 high utility phonic generalizations and uses pseudowords. The test was administered individually to 192 pupils from four different states, including 45 who were instructed with a whole language approach and 147 who were taught using a more traditional approach such as a basal series. The overall performance on each of the phonic areas assessed was in the mid- to high 90s, regardless of the instructional approach used.

CARDOSO-MARTINS, CLAUDIA. (1991, June). Awareness of phonemes and alphabetic literacy acquisition. *British Journal of Educational Psychology, 61,* 164-173.

Examines the relation between children's awareness of phonemes and their acquisition of orthography. Subjects were two groups of low SES Brazilian children. In the first group, 26 first graders learned to read by a syllabic method. In the second group, 32 children from the same first grade class learned to read through a phonemic method. Phonemic awareness of beginning and ending sounds was assessed at the beginning of the school year. Literacy acquisition progress was assessed at the end or middle and end of the school year. Literacy progress assessment entailed asking children to read and spell isolated words. Results of correlation analyses and fixed multiple regression analyses indicated that, regardless of method, awareness of phonemes was significantly related to progress in reading and spelling. Phonemic awareness observed at the beginning of literacy acquisition may be less important when reading instruction proceeds through a syllabic method.

BLACHMAN, BENITA A. (1991, November). Early intervention for children's reading problems: Clinical applications of the research in phonological awareness. *Topics in Language Disorders, 12,* 51-65.

Reviews research in the efficacy of training in phoneme awareness and sound-symbol associations with kindergarten children. Two studies previously published by the author are presented. In the most recent, subjects included 84 experimental and 75 control children. Experimentals met in groups of four or five, 4 days a week, 15 to 20 minutes a day, for 11 weeks. They completed 41 lessons. Following instruction, experimentals significantly outperformed controls on measures of phoneme segmentation, letter-sound knowledge, reading phonetically regular real words, reading phonetically regular nonsense words, and invented spelling. Examples of activities used with the children are presented. The other research reviewed supports the author's contention that the inclusion of phonological awareness instruction is an important element in fostering beginning reading.

HASKELL, DOROTHY W.; FOORMAN, BARBARA R.; & SWANK, PAUL R. (1992, March/April). Effects of three orthographic/phonological units on first-grade reading. *Remedial and Special Education, 13,* 40-49.

Investigates whether instruction at the onset-rime level (e.g., b-at) facilitates first graders' accuracy in word reading more than instruction at the whole word level (bat) or

phoneme level (b-a-t). Subjects were 48 first graders from four of seven first grade classes in a predominantly middle-class, integrated, suburban public school in the southwest. The teachers used a basal series and described their approach as language experience in transition to whole language and integrated language arts. Pupils were randomly assigned to onset-rime, whole word, phoneme, or unseen control (receiving whole language instruction in the classroom) groups and trained with individual cardboard letter sets in 15 20-minute sessions over a 6-week period. Groups were comparable on pretests of intellectual ability (PPVT), phonemic segmentation (Rosner's Test of Auditory Analysis Skills), reading achievement (GMRT-A), and ability to read 40 regular and 20 exception words. ANOVAS with repeated measures were conducted on the number of regular and exception words read correctly during the three within-training assessments and on the posttest. An additional ANOVA was conducted on the number of phonetic and nonphonetic errors on exception words in the posttest with posttest accuracy as a blocking variable. On the posttest of the 60 words, the phoneme and onset-rime groups were significantly more accurate than the whole word group, and there was a tendency for the onset-rime group to outperform the other three groups. There was also a tendency for phoneme group pupils to be more accurate on regular words, with onset-rime pupils more accurate on exception words.

SOUNDY, CATHERINE (1991, FALL). Classroom comparisons of young children reading collaboratively. *Reading Instruction Journal, 34,* 13-16.

Reports on differential patterns of reading behaviors observed in kindergarten and first grade children involved in Storybook Partnerships. Participants were 100 pupils from two kindergarten (n=45) and two first grade classrooms (n=55) in one urban school. The school served families from a wide range of ethnic and socioeconomic backgrounds. Children were paired with a classmate to create dyads that cooperatively engaged in reading behavior for 15 minutes daily. Control groups in kindergarten and first grade classrooms engaged in sustained silent reading. Conversational exchanges and field observation notes were recorded for 6 weeks of study. Analyses of the narrative descriptions revealed differences in the behaviors displayed by kindergarten and first grade children. Kindergartners began by discussing information on the front cover of their books, followed by "Once upon a time" or "One day" beginnings. They then shifted to the illustrations in telling the rest of their story and were able to proceed at a fairly regular pace. They were kinesthetically inclined and often pointed to details in pictures or pretended to manipulate objects in illustrations. First graders demonstrated attention to the notion of correctness and heightened awareness of words. They focused on text; illustrations were of secondary concern. Their efforts at processing information at the word level appeared to require considerable learner attention. If several words were too difficult, they located an easier book. They frequently returned to books that had been read on previous occasions.

TAYLOR, BARBARA M.; SHORT, RUTH A.; FRYE, BARBARA J.; & SHEARER, BRENDA A. (1992, April). Classroom teachers prevent reading failure among low-achieving first-grade students. *The Reading Teacher, 45,* 592-597.

Describes the pilot implementation of the Early Intervention in Reading (EIR) program, an in-class supplement to the regular first grade reading program, with low achieving first grade pupils. Thirty of the lowest achieving first grade pupils in six first grade classrooms (5 per room) were identified for the EIR program. Teacher judgment, the GMRT-R, knowledge of consonants and basic sight words, and a test of ability to segment and blend words were used to select participants. Thirty low achieving children from six other first grade classrooms served as controls, and 30 pupils of average ability in the six classes using EIR participated in testing so that comparisons could be made. The six classroom teachers received training in instructional procedures during one summer workshop and three after

school meetings. The target groups worked with their classroom teachers in 15- to 20-minute sessions conducted daily from the end of October through April. Instructional procedures involved use of quality literature, development of readers' phonemic segmentation and blending ability, and use of phonic, syntactic, and context clues during text reading. In May, final testing of the EIR and control groups was conducted using the GMRT-A, the Burns-Roe Informal Reading Inventory, and a 150-word selection from an easy reader. Test results indicated that 67% of the EIR group were reading on a preprimer or higher level, and 50% were reading at an end of first grade level or better. As a group, their mean percentile score on the GMRT increased from 29 to 37 between September and April. In comparison, only 36% of the control group were reading on at least a preprimer level by May. Approximately 20% were reading on an end of first grade level or better. ANCOVA procedures, using the GMRT-R as the covariate, revealed that the EIR group had a significantly higher mean raw score than the low achieving control group at the end of the school year.

SEARFOSS, LYNDON W., & ENZ, BILLIE J. (1991, Fall/Winter). The impact of the Collaborative Literacy Intervention Project (CLIP) on student achievement. *Arizona Reading Journal, 20,* 5-6, 11-12.

Reports the results of two years of study of the Collaborative Literacy Intervention Project (CLIP) for at-risk first graders in Arizona schools. CLIP, a one-to-one tutoring project, is a derivative of Reading Recovery. Students were tested using pre- and posttests, including letter identification, writing samples, dictation tests, Concepts about Print, and an analysis of book levels for materials read. At the end of the first year, CLIP lessons had a statistically significant impact on pupils' reading and writing skills. Significant improvement in overall reading levels was noted for all pupils. In the second year, data were collected for an additional 197 pupils. Similar findings and conclusions were noted. CLIP intervention raised the achievement levels on the test variables for first graders of all genders and all ethnicities. Preliminary results of CLIP pupils followed into second grade give tentative support for the sustained effects of CLIP intervention.

REUTZEL, D. RAY, & HOLLINGSWORTH, PAUL M. (1991, October-December). Using literature webbing for books with predictable narrative: Improving young readers' prediction, comprehension, and story structure knowledge. *Reading Psychology, 12,* 319-333.

Investigates the effects of webbing for books with predictable narrative on children's abilities to predict story structure and retell story events. Subjects were 54 children from four first grade classrooms. The children were randomly assigned to one of two experimental groups or a control group. Working with two predictable narratives, children in experimental group 1 were instructed in a six step webbing procedure, and children in experimental group 2 were instructed in a six step Directed Listening/Reading Thinking Activity (DL/RTA). The children in the control group were instructed with the school's basal program while additionally reading and discussing the predictable narratives used by the experimental groups. The same teacher taught all three groups during the span of the study, with instructional time equalized. Dependent measures were each child's oral retellings of the two narratives parsed into story structure grammar units, answers to direct comprehension questions about the stories, and performance on the Scrambled Story Prediction Test. Mean raw scores for each assessment task were submitted to five separate ANOVAS. Findings showed children who received webbing instruction were better able to retell the stories than were subjects who received DL/RTA instruction or controls. Both the webbing and the DL/RTA groups outperformed the control group on answering comprehension questions pertaining to the stories.

LEAHY, PEG. (1991, Winter). A multiyear formative evaluation of IBM's "Writing to Read" program. *Reading Improvement, 28,* 257-264.

Reports findings from a multiyear formative evaluation of the IBM Writing to Read (WTR) program in nine elementary schools in a midsized suburban school district. Attitudinal data were collected from pupils, parents, and teachers. Students were also compared on the CTBS, using reading and language sections, and on district assessed Competency Based Writing Samples. Qualitative data indicated pupils and parents had very positive reactions to WTR. Teachers reported the advantages of using this program with young children. CTBS scores were compared for those who had and those who had not participated in WTR. Statistically significant differences were found between the two groups on Word Attack, Vocabulary, Reading Comprehension, and Spelling subtests, all favoring the WTR group. These differences covered a 2-year period. Writing samples collected from both first and second grade pupils indicated no overall statistically significant differences, but differences were significant for first grade boys and for all second graders. Pupils who experienced WTR wrote more than their classmates.

KUCER, STEPHEN B. (1991, November). Authenticity as the basis for instruction. *Language Arts, 68,* 532-540.

Seeks clarification of the relation between the understandings held by one third grade teacher and her pupils regarding the purpose of strategy lessons in literacy instruction. The teacher implemented a whole language curriculum in her third grade classroom. Most pupils in this class had entered kindergarten speaking Spanish and were transitioned into English literacy in second grade. The six children (three boys and three girls) interviewed were chosen because they were highly verbal in English, were comfortable interacting with the researcher, and represented a range of literacy abilities (Reading Miscue Inventory): two were proficient, two were moderately proficient, and two were nonproficient. The focus of this study was interpretation of the purposes of the modified cloze activity, selected by the teacher to develop skills in using context clues and in applying reread and read-on strategies. The teacher and pupils were interviewed four times throughout the year, within 24 hours of the strategy lesson, using questions that focused on the intention of the activity. Little shared understanding was found between the teacher and the pupils as to the purpose of the modified cloze activity. Only 7% of the time did pupils understand the activity as the teacher intended, and 10% of the time they had no idea why they were engaged in the task. Mismatches (83% of the responses) revealed that the pupils believed the purpose of the lesson was (1) to prepare them to do a similar task on more difficult text, (2) to learn how to do the task in and of itself, (3) to understand more about the content of the selection, (4) to improve their literacy skills, or (5) to improve their writing and spelling.

AU, KATHRYN H. (1992, February). Constructing the theme of a story. *Language Arts, 69,* 106-111.

Analyzes theme development by one teacher and her pupils in the context of four lessons focused on one basal reader selection. The teacher was an experienced third grade teacher; the group consisted of seven pupils reading at the third grade level. The research method used was discourse analysis of transcripts created from lesson videotapes. Lessons were 20 to 25 minutes in length and followed the experience-text-relationship approach to instruction. In total, three themes for the story were documented: one was the teacher's preselected theme, and two emerged from the pupils. The teacher-selected theme and one pupil-generated theme were sustained by the readers; lack of pupil support for the third theme resulted in its demise. In the final analysis, the teacher did not abandon her theme; however, she negotiated a shift by adjusting questions to build on the theme emerging from

the children. The pupil-generated theme remained most important to the readers in this group.

NEGIN, GARY A. (1991, July-August). A multisensory supplement to reading instruction. *The Clearing House, 64,* 381-382.

Explores the impact of a multisensory supplement to basic reading instruction over a school year. In September 1987, children in one third grade classroom were administered the reading subtest of the SAT Primary, Level II. Two equivalent groups of 15 children were formed on the basis of the SAT results. In addition to instruction in the school's basal series, children in experimental group A listened to audiotapes of selected trade books for 15 minutes daily. In line with a multisensory approach, they were required to slide their fingers under the text of the story as they listened. Pupils in experimental group B also were given basal instruction, but they merely read the same selections as experimental group A for 15 minutes each day. Children in both groups were exposed to the same 115 books over the school year period. Comparisons of June and September results on the SAT Primary Level II indicated experimental group A gained 2 months on average over group B.

ANDERSON, RICHARD C.; WILKINSON, IAN A.G.; & MASON, JANA M. (1991). A microanalysis of the small-group, guided reading lesson: Effects of an emphasis on global story meaning. *Reading Research Quarterly, 26,* 417-441.

Compares the effects of emphasizing story meaning as opposed to word analysis and oral reading accuracy on children's reading performance. Also of interest are the effects of active turn-taking on various aspects of reading performance. Subjects were 143 children in six third grade classes in two schools. Children in each class participated within the context of their regular reading group formed by their teacher prior to the study. The teacher for each class used four stories. Two stories were presented with a focus on story meaning and two with a focus on surface features. Specifically, during group activity each child orally read a specified passage in the story. The teacher marked the miscues made by the child and then asked the child to respond to a passage-related question about meaning or about word analysis. Following group activity, children completed two story-related tasks on their own: an open-ended recall task, and a short written response task. ANOVA procedures applied to various outcome measures revealed that a meaning emphasis approach resulted in superior performance on various measures including recall of propositions, short responses to questions, recall of important elements, oral reading, story interest, and lesson time. The most remarkable gains on various measures were observed for the low and average groups. Additional analyses indicated that children learn the most when they are taking turns reading aloud and answering questions. The average ability of the reading group rather than the ability of individual members had the strongest influence on reader performance on outcome measures. Analyses of page variables that affect the likelihood of comprehension and recall indicated the importance of information relevance, information density, serial position of the page, and the importance of readability.

RUSSAVAGE, PATRICIA MCGRATH. (1992). Building credibility for portfolio assessment. *Literacy: Issues and Practices, 9,* 19-25.

Describes a pilot study of portfolio assessment conducted by three third grade classroom teachers from the same school over a 5-month period. The three teachers employed a commercially designed portfolio package. The teachers agreed on a list of required components that the portfolios would include so comparisons could be made across classrooms. At the end of the 5 months, the portfolios received scores in both reading and writing with regard to amount, attitudes, and progress for a total of six scores. Ten portfolios from each class were then scored blindly by the other two teachers in the study, yielding interrater

agreement on 30 portfolios. The highest degree of teacher agreement was in the area of reading development. In the area of writing, high performers were not as clearly identified. Results of the study will be used to develop a portfolio system that allows for teacher flexibility and can meet individual students' needs, while at the same time providing continuity and consistency across classrooms and grade levels.

DOWNHOWER, SARAH L., & BROWN, KAREN. (1992, Winter). The effects of predictable material on first graders' reading comprehension: A teacher action research study. *Ohio Reading Teacher, 26*, 3-10.

Examines the instructional practice of using predictable books as compared with traditional basals to increase the reading comprehension of average first graders. The 18 experimental group children, judged as average in reading achievement on the basis of their MRT scores, were taught using five predictable books for 2 weeks each and for 2 to 3 hours per day. Besides engaging in related reading/writing activities, the experimental group children reread each predictable book 40 or more times during each 2-week period. The 21 control group children were instructed with the teacher manual of the adopted basal reader. In addition to offering workbooks and skills practice, the control group teacher read stories aloud daily. Both groups showed significant pre/post gains in comprehension as measured by the CAT. There were significant differences, however, between groups in standard scores and grade equivalents in favor of the experimental group.

FOORMAN, BARBARA R.; FRANCIS, DAVID J.; NOVY, DIANE M.; & LIBERMAN, DOV. (1991, December). How letter-sound instruction mediates progress in first grade reading and spelling. *Journal of Educational Psychology, 83*, 456-469.

Studies changes in the ways first graders read and spell words as they are exposed to more or less letter-sound instruction. Two groups of 40 children from six first grade classrooms differed in the amount of daily letter-sound instruction they received, but were comparable in ethnic diversity, age, reading achievement, and intelligence. All subjects were administered tests of phonemic segmentation and of reading and spelling three times during the year (October, February, May). Repeated measures analyses indicated no classroom differences in phonemic segmentation. However, classrooms with more letter-sound instruction improved at a faster rate in tests of reading and spelling 60 regular and exception words. Individual growth models analysis indicated that phonemic segmentation scores obtained in October predicted overall performance in reading and spelling. Growth in segmentation predicted overall performance in spelling but only predicted end-of-year differences in regular and exception word reading. Finally, better reading of regular words in October was associated with faster growth in spelling, and better spelling of regular words in October was predictive of May word reading.

## V-5 Teaching reading—grades 4 to 8

STAHL, STEVEN A., & KAPINUS, BARBARA A. (1991, September). Possible sentences: Predicting word meanings to teach content area vocabulary. *The Reading Teacher, 45*, 36-43.

Reports the results of two studies to determine the effectiveness of Possible Sentences (PS) as an instructional technique for improving student vocabulary. Study 1 investigated whether PS helps children recall more information from a text than if they had read it without the special PS instruction. A total of 62 fifth grade pupils was involved. Possible Sentences were compared with semantic mapping. Subjects were given three

posttests, two immediately after discussion, a written free recall, a sentence anomaly test, and a delayed multiple-choice test on target words. Statistically significant main effects were found only on the multiple-choice measure, although PS produced higher scores than semantic mapping on the other measures. The second study looked at PS combined with whole class discussion to determine if discussion with PS produced better vocabulary recall than did brainstorming about the general topic of study. Included were 80 fifth graders in five classrooms. Statistically significant differences were found on the written free-recall measures and the sentence anomaly measures, but not on the delayed multiple-choice test. PS appears to be a simple and effective approach to preparing pupils to read content area texts.

FOLEY, CHRISTY L.; FARRA, HEIDI E.; & CHANG, EVANGELINE ABAYON. (1991, Fall). Supplementing a fifth-grade basal reading program with taped and paired repeated reading. *Journal of Reading Education, 17,* 6-14.

Investigates the effectiveness of adding a supplement of taped and paired repeated readings to the basal reading program for fifth grade Guamanian pupils in order to improve oral reading, word recognition, comprehension, and reading rate. Subjects, 24 average readers, read one basal selection weekly for an 8-week period. One group received traditional basal instruction following the instructions in the teacher's manual. The other substituted taped and repeated readings for the seatwork, studybook, and focus on comprehension sections. Informal reading inventories were administered as pre- and postassessments. No significant differences were found on oral reading word recognition or rate. Significant differences were found in oral reading comprehension favoring those participating in taped and paired repeated readings. Observations suggested the motivational value of adding taped and paired repeated reading to basal activities.

ARMBRUSTER, BONNIE B.; ANDERSON, THOMAS H.; & MEYER, JENNIFER L. (1991). Improving content area reading using instructional graphics. *Reading Research Quarterly, 26,* 393-416.

Studies the effectiveness of using an instructional graphic frame, a visual representation of the organization of important ideas in a text, with fourth and fifth grade pupils reading from social studies textbooks. Six fourth and six fifth grade teachers in social studies classes taught content matter using the frames or strategies recommended in the teacher's manual accompanying the social studies text. Four rounds of treatments were presented during the year, with each teacher and child participating in both conditions each round. Round 1 indicated that framing was helpful for both fourth and fifth grade children. Combined analysis of all four rounds suggests the utility of framing as an instructional technique. For fifth graders, framing was a more effective instructional technique than the strategies recommended in the teacher's edition of the textbook.

HAYES, DAVID A., & REINKING, DAVID. (1991, October). Good and poor readers' use of graphic aids cued in texts and in adjunct study materials. *Contemporary Educational Psychology, 16,* 391-398.

Ascertains the effectiveness of adjunct study material and explicit textual cues on good and poor readers' comprehension of text, attention to graphic aids, and recall of graphically displayed information. Subjects were 277 eighth graders from 12 English classes in a rural junior/senior high school. Subjects were blocked on reading achievement and then randomly assigned to one of four treatment groups. Treatment 1 required pupils to study specified passages without explicit cues to examine the graphic aids and without adjunct study materials. Treatment 2 required pupils to study with explicit cues to examine graphic aids at appropriate junctures of the text, but without adjunct study materials. Treatment 3 required

children to use adjunct study materials as they read the passages that contained no explicit cues to examine graphic aids. Treatment 4 required subjects to use adjunct study materials with passages containing explicitly cued graphic aids. Children in each treatment group read two passages—each approximately 300 words—accompanied by two graphic aids, one depicting information redundant to the text prose and one depicting information added to the text prose. A child was categorized as a good or poor reader based on a reading score that was above or below the 35th percentile on the MAT. Dependent measures were multiple-choice tests of literal and inferential prose comprehension and of graphic information that was redundant and nonredundant with the text. ANOVA procedures applied to the data indicated performance on prose comprehension was not affected by treatment. However, use of adjunct study materials did benefit both good and poor readers. The benefits of adjunct study material were greater than the benefits of explicit textual cues. Also, textual cues and adjunct study materials in combination had greater benefits than adjunct study materials alone.

SCHUNK, DALE H., & RICE, JO MARY. (1992, Winter). Influence of reading-comprehension strategy information on children's achievement outcomes. *Learning Disability Quarterly, 15,* 51-64.

Reports two experiments designed to examine the effects of strategy information on children's acquisition and transfer of reading outcomes and strategy use. In both studies, fourth and fifth grade pupils with severe reading skill deficiencies (33 subjects for each study) were taught a comprehension strategy to find main ideas. Achievement outcomes were assessed before and after instruction, and a maintenance test was given 6 weeks later. The two sources of strategy information investigated were feedback on the value of the strategy and instruction on how to modify the strategy for different tasks. An additional focus was determining how sources of strategy information influenced perceived self-efficacy. In experiment 1 treatment subjects received strategy instruction and strategy value feedback linking strategy use with improved performance; controls were given comprehension instruction, but were not taught the strategy. Experiment 2 investigated the role of strategy modification instruction. Some subjects were taught the comprehension strategy for finding main ideas; controls received instruction without strategy training. Results confirmed that subjects who received strategy value feedback (experiment 1) and strategy modification instruction (experiment 2) demonstrated the highest self-efficacy, skill, strategy use, and transfer.

REUTZEL, D. RAY, & HOLLINGSWORTH, PAUL M. (1991, July/August). Investigating topic-related attitude: Effect on reading and remembering text. *Journal of Educational Research, 84,* 334-344.

Explores the effect of topic-related attitude on readers' learning and remembering from text. Subjects, 58 sixth graders, were randomly assigned to one of three topic-related attitude treatment groups for the study of one social studies unit. The unit was taught by the classroom teachers who were trained in procedures and randomly assigned to one of three treatment conditions: a favorable attitude group (presenting a positive perspective of the fictitious country of study), an unfavorable attitude group (presenting a negative perspective), and a neutral attitude group (control). Instruments for the study included an attitude scale, three multiple-choice tests, and three free-recall protocols to assess recall of text under immediate and delayed testing conditions. Data were analyzed in three parts using ANCOVA procedures. Results revealed that the topic-related attitudes did not appear to interfere with immediate recall of text information or cause subjects to selectively encode information. Free recall was significantly affected by testing time. Subjects recalled significantly more in an immediate recall condition than in a delayed condition.

COMSTOCK, MARY. (1992, April). Poetry and process: The reading/writing connection. *Language Arts, 69,* 261-267.

Presents a case study of poetry writing and reading development in a fifth grade classroom. The classroom was one in which process writing and reading had been encouraged continually throughout the school year. The researcher's focus was placed on five girls from the class who volunteered to participate in a poetry group over a 6-week period as they continued reading and writing in other genres. While participating in the group as an equal member, the researcher observed, mentoring, rather than directing, when asked. Data included observational notes made by the researcher, as well as tapes of various interactions among group members, including collaborative writing sessions and poetry sharing periods. Findings indicated that children's written poems at any one time overwhelmingly reflected their current definition of poetry. Conclusions support exposing children to a wide range of poetry, poetry writing techniques as they relate to children's interests, and composition based on the need for purposeful writing experiences.

MILLER, KATHLEEN K., & GEORGE, JOHN E. (1992, February). Expository passage organizers: Models for reading and writing. *Journal of Reading, 35,* 372-377.

Investigates the effects of Expository Passage Organizers (EPOS), process guides focused on text structure, and the organization of main ideas and details on the reading and writing performance of sixth graders. Subjects were 35 pupils of average ability from two heterogeneously grouped classes who were randomly assigned to one of two groups; reading and writing pretests showed no significant differences between the groups. The first group was instructed in the use of EPOS; the second group completed word mapping study guides. The study was conducted 40 minutes a day, 4 days a week for 7 weeks. Both groups were instructed using science and social studies materials that represented the four most common expository structures: description, problem solving, compare-contrast, and cause-effect. The posttest involved written recalls for four text passages representing the four text structures studied. The recalls were evaluated and scores were pooled to derive a postreading comprehension score. Content and organization were evaluated to derive a writing score. Two MANOVAS were used to analyze the reading comprehension and writing posttests. Results indicated that the use of EPOS made a significant and positive difference in both reading and writing performance.

CROWHURST, MARION. (1991, October). Interrelationships between reading and writing persuasive discourse. *Research in the Teaching of English, 25,* 314-338.

Investigates both the effect of instruction on writing persuasive discourse and the effects of reading on writing and of writing on reading within the mode of persuasion. The 100 subjects were from two sixth grade classes in each of two schools. They were stratified by sex and ability and randomly assigned to one of four treatment groups: instruction in a model for persuasion plus writing practice, instruction in a model for persuasion plus reading practice, reading novels and writing book reports plus a single lesson in the persuasion model, and reading novels and writing book reports (control group). Instruction was given for ten 45-minute lessons over 5 weeks. Both pretests and posttests consisted of writing a recall protocol of a persuasive text and writing two persuasive compositions. Reading and writing scores were analyzed using a MANOVA in a 2 (test time) by 4 (group) design with repeated measures on the first factor. Follow-up univariate tests were used to determine which of the dependent variables contributed to the significant multivariate F. On the posttest, both the writing and the reading groups scored significantly higher than the control group on writing quality, on the organization of composition, on the number of conclusions and text markers used, and on the degree of elaboration of reasons. There were no differences between the control group and other groups on reading recall scores.

DANA, MARION E.; SHEFFLER, ANTHONY J.; RICHMOND, MARK G.; SMITH, SANDRA; & DRAPER, HOWARD S. (1991, Summer). Writing to read: Pen palling for a purpose. *Reading Improvement, 28,* 113-118.

Explores the effect of pen-palling on the reading and writing performance of two separate populations. Subjects in the two treatment groups were 11 college remedial readers enrolled in a developmental reading course, and a heterogeneous group of 24 sixth graders in Alaska. Controls for each population, 9 college remedial readers and 22 sixth graders, were established in the same locations as their respective experimental groups. In lieu of traditional writing instruction, both the college and the sixth grade experimental groups received a write-edit-rewrite model of instruction with pen-palling between the college and the sixth graders as the practice application vehicle for skill development. During the experimental period of one semester, five letter exchanges took place. Syntactic error and syntactic complexity were ascertained for the college students and the sixth graders' first and last letters. All sixth graders were administered grade level appropriate cloze tests as pre- and postmeasures of comprehension. Pre- and postmeasures of college students' comprehension and vocabulary were forms E and F of the NDRT. ANCOVA and correlated *t* tests indicated a significant increase on reading comprehension and a decrease in writing errors of the sixth grade experimental group. Significant improvement in writing complexity was observed for the college level experimental groups.

MORRISON, TIMOTHY G., & SUGGETT-DOYLE, CAROL. (1992, Spring). Writing to improve reading for seventh and eighth grade students. *Reading Improvement, 29,* 25-33.

Investigates differences in the achievement and experiences of below grade level seventh and eighth grade pupils instructed by a basal reader approach and peers engaged in a language arts program emphasizing writing. The control group of 123 children was taught for 1 year using a basal reading program. The following year, the treatment group of 108 pupils was taught through a language arts program. Both groups were pre- and posttested on the CTBS. In addition, teachers of both groups noted the number and type of skills taught with each group, the amount of time spent in language arts instruction, and children's attitudes and behaviors in each program. Comparison of mean differences between the two groups indicated no significant difference in performance. Teacher records showed the language arts group received skill instruction in a far greater number of areas than the basal group. Language arts children also were taught skills considered to foster higher level thinking. Much more time was spent in isolated skill instruction for the control group. Finally, the language arts group exhibited more positive attitudes toward reading and writing than did the control group.

ANGELETTI, SARA RAPPOLD. (1991, December). Encouraging students to think about what they read. *The Reading Teacher, 45,* 288-296.

Describes one teacher's procedures for developing children's thinking about literature and their response to it. Procedures were implemented with both a fifth grade and a second grade class. Questions requiring a variety of higher level thinking skills were developed for a variety of books children were to listen to or read during the school year. These were placed on cards that were included with appropriate books. The teacher began by modeling the answering behavior expected from the children and provided whole class and small group oral and written practice in answering questions. Writing stemming from an interpretation of answers from various cards was also modeled and practiced. ITBS scores indicated children in the described program performed as well as those in equivalent grades who had not been in the program. Analysis of writing samples produced after 7 months of instruction

indicated a progression from ability to simply retell, to ability to include higher level thinking in their response to literature.

BAUMANN, JAMES F.; SEIFERT-KESSELL, NANCY; & JONES, LEAH A. (1992, June). Effect of think-aloud instruction on elementary students' comprehension monitoring abilities. *Journal of Reading Behavior, 24,* 143-172.

Investigates, over a 3-week period, the effects of explicit instruction in think-aloud on elementary pupils' reading comprehension monitoring abilities. Subjects were 66 fourth graders from a rural midwestern school who were randomly assigned to one of three treatments: (1) Think-Aloud (TA), where pupils were taught various comprehension monitoring and self-correction strategies for story reading using TA as a vehicle, (2) DRTA, where children were taught a four step predict/verify strategy for responding to stories, and (3) DRA, where pupils read stories according to a four step noninteractive guided reading approach taken from a basal reader manual. The same stories were employed in conjunction with each treatment. Measures administered to all subjects included two pretests of preintervention abilities in comprehension monitoring, and three posttests assessing abilities to detect errors, monitor comprehension, and respond to cloze. A structured interview probing the qualitative aspects of children's abilities to think aloud and monitor reading comprehension was also conducted with each subject. MANCOVA procedures and planned contrasts conducted on the data reveal the TA and DRTA treatment groups were more successful in comprehension monitoring on all assessment measures than was the DRA group. The DRTA group outperformed the TA group on the comprehension monitoring posttests, while the TA group outperformed the DRTA group on the error detection task. Qualitative analysis of interview data suggested the TA group used greater depth and breadth of comprehension monitoring abilities than either the DRTA or the DRA groups.

PATTERSON, ALICE, & RISKO, VICTORIA J. (1990). Using mediated instruction within theme-based instructional contexts to enhance reading comprehension. In Bernard L. Hayes & Kay Camperell (Eds.), *Achieving excellence in reading* (pp. 115-131). Athens, GA: American Reading Forum.

Compares the effects of four notetaking procedures on pupils' ability to retell important story ideas. Sixty-eight pupils from three intact language arts classrooms in an innercity school were stratified on reading percentile scores of the SAT and randomly assigned to one of four treatment groups: (1) group verbalization (brainstorming of important ideas through prompting resulting in main idea choice) and concept mapping; (2) group verbalization and prereading thematic organizer; (3) notetaking with prereading thematic organizer and concept mapping; and (4) notetaking using a story frame and postreading questions (control). Written story retellings from the past 2 days were analyzed for story components (total scores and story component scores). On the final day, pupils answered seven short answer questions (the third dependent measure). All three experimental strategies were found to be more effective in contributing to ability to retell important ideas than just asking children to take notes following a story frame outline. Results were more robust when pupils were allowed to use their notes.

PAULER, SHIRLEY M. (1991). An analysis of the themes in students' international peer correspondence while studying a social studies unit about South America: A pilot study. In Bernard L. Hayes & Kay Camperell (Eds.), *Literacy: International, national, state, and local* (pp. 173-185). Athens, GA: American Reading Forum.

Looks at the effects of using American transnational students as peer correspondents with students residing in the United States. The peer correspondent sample was seven volunteer homeschooled children, ages 11 to 15, from four families living in Athens, GA. The

American transnational sample was seven members of a sixth grade class in Quito, Ecuador. The researcher met with the homeschooled children biweekly for 7 weeks in 1.5- to 2-hour sessions to study a unit on South America. Once a week children wrote letters to the South American penpals asking questions pertaining to what they were studying at the time. Letters were faxed to the teacher in Quito, who faxed responses a few days later. A method of analytic induction was used to examine the content of the letters. Several themes emerged in the correspondence. Children appeared to have an authentic reason to use written language. In addition, they were able to use the information requested and received via the letters to help them relate to and clarify the content of what they were reading.

ABRAHAM, MICHAEL R.; GRZYBOWSKI, EILEEN BROSS; RENNER, JOHN W.; & MAREK, EDMUND A. (1992, February). Understandings and misunderstandings of eighth graders of five chemistry concepts found in textbooks. *Journal of Research in Science Teaching, 29,* 105-120.

Assesses understandings and misunderstandings of 247 eighth graders reading about processes of chemical change, dissolution, conservation of atoms, periodicity, and phase change in two of their textbooks. Three questions served to focus the study: What misconceptions did students have concerning the chemistry concepts from the textbooks? How was reasoning ability related to misconceptions about the chemistry concepts? How effective were the textbooks in teaching the chemistry concepts? Results on two pencil and paper Piagetian tasks were used to assess students intellectual level. The majority of students were classified as concrete operational. Levels of understanding were low on most of the concepts studied. Intellectual level and scores on the understandings of chemistry concepts were then correlated. Significant relations were determined for two problem areas and for the total concept score. Eighty-six percent of the responses to the test items indicated that students either had no understanding or had developed misconceptions about the concepts. Two possible explanations, poor teaching and inappropriateness of the concepts for the age group, are offered as possible explanations for the data.

FISHER, PETER J.L.; BLACHOWICZ, CAMILLE L.Z.; & SMITH, JUDITH C. (1991). Vocabulary learning in literature discussion groups. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 201-209). Chicago, IL: National Reading Conference.

Seeks to answer several questions: Which words do children select to teach to other pupils and why? What procedures do children use to teach other children? How effective are pupils in learning the words taught in their groups? The subjects were 12 boys and 12 girls from an intact fourth grade classroom. Reading ability ranged from third to seventh grade level based on the ITBS. The children were divided into 6 cooperative literature groups of 4 and met 14 times over a 3-week period. Each hourly session included group word discussion, silent reading, and work on the task for the next day's discussion. Children kept journals of personal reactions, summaries, and predictions. Roles for each member rotated daily and included discussion director, vocabulary researcher, literary luminary, and secretary checker. As vocabulary researcher, pupils selected five to six interesting words from the chapter to teach other group members. The child would lead a discussion about the words, call on others to locate the word in context, and confirm predictions or give accurate meanings. Audiotapes were made of each group during 3 sessions to total 18 discussions. Children were individually interviewed to determine why they chose the words they did. Pupils listed the words they taught in their reading journal. Effectiveness of the pupil instruction was determined by a vocabulary test developed by the teacher. Six categories emerged illustrating why words were chosen: unfamiliarity, author's style, context as an aid to meaning, focus on word elements, prior experience, and don't know. The most common

reason given was that the word was unfamiliar. The vocabulary test results (range, 66%-95%) suggest that most children learned the new words selected.

WEISBERG, RENEE, & BALAJTHY, ERNEST. (1990). Improving disabled readers' summarization and recognition of expository text structure. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 141-151). Provo, UT: College Reading Association.

Questions whether the use of graphic organizers will improve disabled readers' ability to identify levels of importance and improve subsequent written summaries. Subjects were 25 junior high school children attending an ungraded clinical school for reading/learning disabled pupils (mean reading level 5.6). Pretesting prior to training sessions required children to read two passages, to differentiate levels of importance in passages by color underlining, and to write summaries. Pupils received five 1-hour training sessions over a 2-week period in the use of graphic organizers. Posttesting procedures were identical to the pretest except children constructed graphic organizers as an intermediate step between underlining and writing summaries. For scoring purposes, grids were constructed based on the levels of important parsed idea units. Results indicate that the addition of the graphic organizer task, interposed between underlining and summary writing, provided even more enhancement of summarization ability. Practice with the graphic organizer improved pupils' ability to identify levels of importance by underlining.

JENNINGS, JOYCE HOLT. (1991). A comparison of summary and journal writing as components of an interactive comprehension model. In Jerry Zutell & Sandra McCormick (Eds.), *Learner factors/teacher factors: Issues in literacy research and instruction* (pp. 67-82). Chicago, IL: National Reading Conference.

Explores the use of summarization and journal writing in conjunction with an interactive comprehension strategy (KWL). Six intact fifth grade classes (n=141) from two suburban schools were randomly selected as a control group, a KWL and summary writing group, or a KWL and journal writing group. The KWL + strategy instruction lasted 4 months as part of a social studies unit. Three chapters from the class textbook were divided into three sections to total nine sections which were the basis of the KWL and corresponding type of writing. Interviews were conducted with participants and observations and audiotapes were made of classroom interactions during the study. Comprehension was tested using a pretest/posttest design that included chapter tests, category expectations task, word knowledge task, and a unit test. Findings support the conclusion that the KWL is an effective interactive comprehension strategy and that children's writing about their reading contributes to their comprehension. Journal writing is more effective than summarizing when used in conjunction with the KWL strategy. Differences in comprehension scores in relation to writing are discussed.

FARRIS, PAMELA J., & HANCOCK, MARJORIE R. (1991, November/December). The role of literature in reading achievement. *The Clearing House, 65*, 114-117.

Investigates the use of children's literature both in and outside of school and its relation to the reading achievement of sixth graders. Surveys were mailed to a randomly selected sample of rural elementary schools with enrollments of fewer than 500 that administered the ITBS (used to judge relation of literature use to school achievement). Specific survey questions addressed school enrollment, library volumes and circulation, participation in paperback book clubs, and the primary method of teaching reading. Data from the 46 usable surveys revealed that about one-third (34.8%) used a traditional basal series; only one school reported a total literature-based program. Nearly two-thirds reported use of a combination of basals and literature. There was no significant difference, however, between the

type of reading program and the reading achievement of sixth graders. All but one of the respondents indicated that from 75 to 100% of the teachers participated in paperback book clubs. The mean number of library volumes per school was reported to be 5,616 with an average of 24.2 volumes per child. There was no significant difference in reading achievement between children in schools with more than 25 volumes per student and children in schools with fewer than 25 volumes per student ($p < .05$). For those schools reporting library circulation, the mean for each pupil was 25.64 volumes, ranging from 1.5 to 77.7 volumes. A significant difference between sixth grade reading achievement and circulated volumes per child was evident for children using more than 30 volumes per year and those using fewer than 30 volumes per year ($p < .01$).

SWAFFORD, JEANNE. (1990). A comparison of the effectiveness of content area reading strategies at the elementary, secondary, and postsecondary levels. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 111-126). Provo, UT: College Reading Association.

Investigates the research base for elementary level content area reading strategies and compares the results to those found at the secondary and postsecondary levels. Six widely used content area reading methods texts were reviewed, resulting in the identification of 13 strategies. Eighty-seven studies examining the effectiveness of the strategies were reviewed in terms of the type of reader (high, average, low), the kind of content text, the dependent measures used, and the strategy's effectiveness. The strategies that received the most research attention were mapping (24 studies), effectiveness of text structure (21 studies), advance organizers (16 studies), and DRAs (10 studies). No studies were located for guides (pattern, reasoning, or three-level) or for list-group-label lessons. Patterns involving effective strategies by grade levels and text type are discussed. In comparison, approximately 55% of the studies in each data set (elementary, secondary, and postsecondary) found that strategies were effective. The most frequently researched strategies at all three levels were organizer strategies and the use of text structure. Strategies receiving the least attention were guides.

RISKO, VICTORIA J.; PATTERSON, ALICE; YOUNT, DALE; & SMITH, MARGARET. (1990). Providing mediated instruction to enhance students' note taking and reading comprehension. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 99-110). Provo, UT: College Reading Association.

Examines the effect of different notetaking strategies on pupils' ability to write story retellings. Sixty eighth grade children from three intact language arts classes in an innercity school served as the sample. All of the children received seven months of notetaking instruction using story grammar outlining or concept mapping prior to the study. The children were stratified on reading percentile scores and randomly divided into four notetaking groups: (1) mediated (group verbalization and concept mapping), (2) mediated using a thematic organizer, (3) pupil generated notetaking using concept mapping, or (4) a story grammar frame. The lessons for the seven-day treatment were scripted for groups to include story reading with pauses for rehearsal, concept mapping, or reflection questions, and written retellings. Retelling performance on the last passage was examined using a 1-way ANOVA. Mediated instruction and a theme focus appeared to influence group effects significantly. The strategy that was the least effective was the one that asked pupils to use a story grammar outline and questions.

## V-6 Teaching reading—high school

DREHER, MARIAM JEAN. (1992, February). Searching for information in textbooks. *Journal of Reading, 35,* 364-371.

Reviews the literature on search strategies used by high school and college students to locate information for specific purposes, especially for finding information in textbooks. Specifically, three research studies were reexamined to identify instructional interventions that would help students use search strategies more effectively. Suggestions are included for useful self-monitoring questions that could be taught to students.

BOODY, ROBERT M., & ISAKSON, MARNÉ. (1992, Spring). Inviting the reluctant into the joys of reading. *Contemporary Issues in Reading, 7,* 89-99.

Uses naturalistic methods in collecting data on means by which reluctant readers at the high school level could be enticed to read. Data were collected through participant observation, interviews, and document analysis. One of the authors was the classroom teacher who kept a log containing the basic literacy events of the day, observations she made, and reflections on these events. The second author visited the classroom several times a week for 1 academic year and took field notes, interviewed students, participated in discussions, and taped sessions. Analysis of the data revealed a taxonomy of categories used to invite students to read. The complete taxonomy is appended to the article. The first distinction in categories was between direct and indirect teacher involvement. Another distinction was whether the invitation to read was reader initiated or whether peer involvement was present. Three types of peer involvement were identified: (1) peer initiated, (2) unintended peer hook, and (3) reader initiated. In viewing the taxonomy and the findings, the authors concluded that the teacher, while not solely responsible for the classroom environment, has the greatest impact. One conclusion drawn is that there is not a blueprint for inviting students into reading.

## V-7 Teaching reading—college and adult

SWAFFORD, JEANNE. (1990, Fall/Winter). Comprehensive strategies research and college developmental studies students. *Forum for Reading, 22,* 6-14.

Reviews 14 studies from postsecondary research in content reading strategies that used college students enrolled in developmental reading courses. All studies focused on helping students to identify the main ideas in the text and the relations among the ideas. Five effective strategies were identified: advance organizers, graphic organizers, mapping, structured overview, and use of text structure. The studies reviewed are presented and discussed in relation to the five strategies. Recommendations are given for instruction and research for instructors of college developmental reading courses.

GILLIS, M.K., & OLSON, MARY W. (1991). Do college students who plan before writing score better on essay exams? In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 7-9). Pittsburg, KS: College Reading Association.

Questions whether essay exam scores of college students improve with various amounts of voluntary prewriting planning. Two universities served in the sample selection which included 100 elementary education undergraduates enrolled in a reading methods class and 37 graduate students working toward their master's degrees in reading enrolled in a psychology of reading course. The exam format and schedule remained the same for each course except that directions for the essay questions (range 1-3) encouraged students to brainstorm and outline answers before writing. After completion, the amount of planning for

each essay was classified by the course instructor as none, some, or extensive. Significant differences were found in scores earned by students who did various amounts of planning. Students who planned more, scored higher on the essay question. A follow-up study being conducted investigates whether mandatory planning improves scores on essay exams.

HIRUMI, ATSUSI, & BOWERS, DENNIS R. (1991, May/June). Enhancing motivation and acquisition of coordinate concepts by using concept trees. *Journal of Educational Research, 84*, 273-279.

Tests the effects of providing learners with a graphic illustration of coordinate concept relations to supplement learning from text-based instruction. Subjects were 73 undergraduate students enrolled in three sections of an educational psychology class and assigned to the treatment or control group on the basis of performance on the Advanced Vocabulary Test II from the Kit of Factor-Referenced Cognitive Tests. A matched pair technique was used to make the two groups comparable, and treatment was assigned randomly. All subjects read a passage of approximately 1,300 words. The experimental group received a graphic concept tree that illustrated the relation among the concepts presented in the text. Two instruments were used to determine the effects on six dependent variables: (1) an 11-item posttest of immediate concept acquisition, and (2) an Instructional Materials Motivation Scale to assess motivational impact, including attention, relevance, confidence, and satisfaction. Students who used the concept tree outperformed those in the control group. They also reported significantly higher amounts of attention, confidence, and satisfaction with the instructional materials. No interactions were found between use of the concept tree and vocabulary ability.

DURSO, FRANCIS T., & COGGINS, KATHY A. (1991, March). Organized instruction for the improvement of word knowledge skills. *Journal of Educational Psychology, 83*, 108-112.

Determines the effect of semantic organization on lexical access, sentential processing, and expressive vocabulary. Subjects saw word definition pairs and were asked to report the word with and without the definition as a retrieval cue. Words were studied in both organized and scrambled lists. Lexical access was assessed by asking subjects to classify isolated words; sentence comprehension was determined by asking subjects to decide on sentence appropriateness; and expressive vocabulary was assessed by asking subjects to retrieve words from their vocabulary that would be useful in a specific scenario. Words were organized into three schemes: those sharing a common semantic feature, and a narrow and broad scheme similar to thesaurus presentation. Subjects, 72 college freshmen, completed tasks on the computer over several days. Subjects learned the definitions of 16 words from a particular combination of organization and scheme and then completed the three transfer tasks. Organizing words around a common theme improved performance on subsequent comprehension tasks and improved response time. Performance on the scenario completion was strongest for those receiving the broad thesaurus organization scheme.

PEARSON, JOSEPH ADAM. (1991, August). Testing the ecological validity of teacher-provided versus student-generated postquestions in reading college science text. *Journal of Research in Science Teaching, 28*, 485-504.

Compares the achievement of high and low reading ability community college students in two classes of introductory biology that varied instruction by postquestioning techniques: teacher-provided versus student-generated. The teacher-provided group (group 1) was posed questions at various taxonomic levels on textual readings assigned over a 5-week period. Members of the student-generated group (group 2) were instructed to generate and use their own questions at the identical taxonomic levels based on the same text over the

same period of time. Subjects were 77 students (40 in group 1 and 37 in group 2) enrolled in a community college. Both classes were taught by the same instructor; training in student-generated questioning procedures was presented by the researcher. Independent variables included: form of questioning (teacher-provided and self-generated), reading ability (NDRT-E), and question type (referent, literal, interpretive, inferential, and self-critical). Dependent variables included scores from both weekly quizzes and a summative examination. These scores were submitted to appropriate ANOVA and MANOVA analyses. Results indicated that (1) training students to generate and answer their own questions based on text reading had a favorable effect on weekly quiz performance; (2) no significant differences were observed between groups on the final, summative exam; and (3) teacher-provided questions at the literal level facilitated the acquisition of intended and incidental discrimination material better than teacher-provided questions at any other taxonomic level.

DUIGNAN, WENDY L. (1992, Spring). Student reading level and college success. *Research and Teaching in Developmental Education, 8,* 95-103.

Summarizes first-run results of a study evaluating the reading component of a University Learning Center. The Learning Center offers noncredit courses (LSK courses) in reading to entering freshmen whose NDRT scores indicate a need for remediation. Evaluated were transcripts, placement test results, and records from LSK courses offered to freshmen enrolled in the reading component in 1988. Measures of success considered were (1) retention through the Spring 1990 semester; (2) satisfactory academic progress (SAP), defined as a GPA of at least 2.0 while taking an average of 12 credits per semester through Spring 1990 (or period of withdrawal); and (3) the proportion of students enrolled and attaining SAP in Spring 1990. Results of the study support a 12.5 reading level on reading placement tests as a cutoff point for deciding who will be recommended for remedial reading instruction. Students with below level reading skills are much more at risk than students who make the cutoff. At-risk students who obtain and satisfactorily complete recommended reading instruction are more likely to be retained and to succeed through the first two years of university study than those who do not complete recommended instruction. At-risk students who satisfactorily complete recommended instruction are also more likely to persist and succeed in completing university study.

STONE, NANCY, & MILLER, KAREN. (1991, Spring). Developmental college reading: Secrets of our success. *Research and Teaching in Developmental Education, 7,* 27-42.

Reports the development, implementation, and evaluation of a newly revised community college course that posits that the reading comprehension cycle consists of predicting, confirming, and integrating. The course, corequisite with an introductory sociology course, uses the sociology textbook for demonstration. Evaluation showed more students passing the revised reading course, higher retention rates, significant improvement in reading comprehension (DRP), and a higher pass rate for the sociology course. Interviews reported students transferring the strategies to subsequent courses and quarters and high degrees of confidence in their strategy use.

MILLER, SAMUEL D., & YOCHUM, NINA. (1991, December). Asking students about the nature of their reading difficulties. *Journal of Reading Behavior, 23,* 465-485.

Examines how 72 students enrolled in university reading clinic settings perceive themselves as readers and what strategies they use to solve their reading problems. Subjects were interviewed about the types of reading difficulties they experienced. They described how they attempted to remediate these difficulties, the type of reader they wanted to be, and how they might improve in their reading. They identified a classmate whom they thought

was a good reader and explained why they made that choice. Among the difficulties these subjects experienced were their ability to read words (77%) and their ability to comprehend text (14%). Self-perceptions were verified through evaluations of informal reading inventories. Appropriateness of strategies was determined by comparing a particular task. The majority of student self-perceptions were confirmed by test data. While subjects with word recognition difficulties had generally developed strategies, many were not appropriate for the difficulty they experienced. Most subjects with comprehension difficulties, however, were unable to demonstrate any strategy that would help them remediate their difficulties. Good readers were generally identified as those students who had good word recognition abilities.

MIKULECKY, LARRY, & STRANGE, REBECCA L. (1986). Effective literacy training programs for adults in business and municipal employment. In Judith Orasanu (Ed.), *Reading comprehension: From research to practice* (pp. 319-334). Hillsdale, NJ: Erlbaum.

Presents two case studies examining job literacy training developed as cooperative ventures involving business, local government, and private consulting firms. In the first case study, 100 unemployed adults were selected and given word processing training. Students attended training 40 hours a week for an average of 20 weeks. Each day was divided among language training, typing and word processing training, work habits training, and individual study time, with much of the class work simulating actual job demands. Case study 2 involved retraining waste water treatment workers for new literacy and technical demands of a changing job. The major academic goal was to help students master technical vocabulary, concepts, and materials. The reading specialist gave aid in interpreting graphs and schematic diagrams, and also helped with reading for a purpose. Both programs were successful to some extent. Both addressed the specific job literacy demands of the target occupations and improved ability to handle those demands. However, there was little transfer to general reading ability in either program.

MARSH, GEORGE E. II; PRICE, BARRIE JO; MCFADDEN, ANNA C.; & BURNS, DARRELL. (1991, Fall). Examination of reading rate and comprehension of management personnel of a telecommunication company. *Reading Improvement, 28,* 179-182.

Examines the effects of a 12-hour training program in speed reading on the reading rates and comprehension levels of corporate managers of a national telecommunications company. Subjects were 39 managers (20 males, 19 females). All had completed high school; 32 held college degrees. Training exercises concentrated on eye movement, phrasing, subvocalization, and speed reading. Activities included matching target words, finding synonyms in a random list, matching sequences of numbers, and reading with an accelerator to increase speed of eye movement and reduce eye fixations. Training effects were examined by comparing pre- and posttest performances on measures of reading rate and comprehension. Reading tests consisted of excerpts from sources ranging in readability from the tenth to the twelfth grade levels. Comprehension questions were based on the content and included literal and inferential questions. Findings indicated that reading rate (wpm) increased from 262.67 (SD =15.77) to 658.59 (SD =181.46). A correlation *t* test computed to compare pre- and posttest performance on reading speed was significant. Comprehension scores increased from 66.67% accuracy on the pretest to 77.41% accuracy on the posttest.

ASKOV, EUNICE N., & BROWN, EMORY J. (1991). Workplace literacy instruction and evaluation: R.O.A.D. to success. In Bernard L. Hayes & Kay Camperell (Eds.),

*Literacy: International, national, state, and local* (pp. 203-209). Athens, GA: American Reading Forum.

Tests the effectiveness of the Real Opportunities for Advancement and Development (ROAD) program designed to assist truck drivers in developing the reading skills necessary to pass the state driving examination. Subjects were 58 truck drivers from 4 counties who completed the 100-hour ROAD course. All subjects had initially failed the Quick Assessment Test (simulates the Commercial Driver's License Test) and scored below the ninth grade level on the Test of Adult Basic Education. Mean age of the sample was 41 years (range 22-62) with 11 years of education completed and an average reading level of 3.0 (range 1.1-6.3). Interviews, tests of reading skill, and knowledge of the test manual's content (criterion-referenced test) were used to determine program effectiveness. Results indicate that teaching with the use of interactive computer software was a key factor in the success of worker participation. Increases were reported in scores on all measures. Reading levels increased 3.3 grades (from 3.0 to 6.3). Fifty-nine percent of the ROAD workers passed the Commercial Driver's License Test as compared to 37% for those who did not complete the course.

## V-8 Instructional materials

FISHER, PETER J.L.; COLLINS, MAUREEN; MAIER, ALICIA; MCKENNA, LINDA; POTTORFF, LUCILLE; SMITH, JUDITH; & TARPEY, MARY. (1992, Winter). How basals teach strategies to derive word meaning from context. *Illinois Reading Council Journal, 20*, 31-40.

Examines fourth grade level of seven basal reader series to determine how children are taught to obtain the meaning of words from context clues. Numbers of words and how and where they were found were noted, as well as the number of lessons included. The number of lessons ranged from a low of 2 in one series to a high of 14 in another basal. The number of words presented varied markedly, with the series at the low end presenting 28 words, while the series at the high end presented 116. Only three of the seven series were found to present most words in extended text. Further, only two of the series had pupils apply the strategy of obtaining the meaning of a word from context with more than a few target words. The variety of clue types used was examined also. The most frequent type of context clue was a direct description or example, but many of the clue types were not readily classifiable. When 15 practice sentences prepared with target words and choices deleted were given to 30 adults to identify the word meanings from context, 7 of the words were identified only 10% of the time. The authors concluded that instruction in the appropriate strategies in contextual word learning often were neglected.

MURPHY, SHARON. (1991, Fall/Winter). Authorship and discourse types in Canadian basal reading programs. *Reflections on Canadian Literacy, 9*, 133-138.

Examines the authorship and discourse patterns of the basal readers in five popular Canadian English-language reading programs at grades 1, 3, and 5. The programs investigated were chosen on the basis of a survey of the programs authorized by the departments of education in the Canadian provinces and territories. Authorship was coded according to the following categories: reprinted, house-written, adapted, or abridged. Discourse types were coded as narrative, poetry, biography, or exposition. Tabulations were made of the proportional representation of authorship and genre forms in terms of number of selections and number of pages. This revealed a shift in the proportions of reprinted text from grade 1 to grade 5. Although approximately two-thirds of the pages and selections for grades 3 and 5 were reprints, at the grade 1 level 61% of the selections and 66% of the pages were house-

written. In general, the grade 1 house-written texts were controlled lexically, syntactically, and textually. The proportion of house-written material, for narrative in particular, tended to decline across the grades, suggesting an increasing emphasis on literature. But this decline was offset by an increase in house-written, expository text in grade 5. In terms of discourse forms, it was determined that the basals contained variety, but this did not equal balance of genre types; narrative dominated.

HAYDEN, RUTH. (1991, Fall/Winter). An evaluation of the reading and writing components of wholistic language arts series' workbooks. *Reflections on Canadian Literacy, 9,* 139-146.

Evaluates a selection of reading and writing workshops that accompany Canadian language arts series purporting to maintain a whole language perspective. The content of four series at both the primary and elementary levels was analyzed according to criteria established for each of seven major categories: (1) relation of workbook components to the basal stories in the series, (2) attention to aspects of prior knowledge and relevance to real world tasks, (3) provision for word identification strategies, (4) provision for reading at various levels of comprehension, (5) attention to various types of text, (6) provision of writing tasks ranging from copying to generation of text, and (7) quality of instruction for completing workbook tasks. Analysis proceeded by selecting every third page in each workbook at each grade level of the series and judging that page according to criteria for each category. Because some series provided more than one workbook at each grade level, totals for each category were tabulated and divided by number of workbooks to determine mean percentages. While all series incorporated activities that reflect a whole language perspective, some series were better than others in particular categories, though no series was best in all categories. For some categories, series' publishers seem to have gone overboard by ignoring the place of one component or overly stressing an aspect of another component. Most series were generally weak in reinforcing strategies taught within the accompanying reader story and/or in providing functional activities. Also deficient was provision of narrative texts, especially in the primary grades.

OLSON, MARY W., & GEE, THOMAS C. (1991, December). Content reading instruction in the primary grades: Perceptions and strategies. *The Reading Teacher, 45,* 298-307.

Surveys 47 primary grade classroom teachers in three states to determine if 17 practices recommended in content reading textbooks, longstanding practice, or empirical research were useful as teachers helped children learn to read expository texts. Teachers also indicated whether content textbooks were easier or harder than stories for their pupils and listed factors which made content materials difficult. Most (70%) found content texts more difficult than stories, citing difficult new concepts, lack of interest, text characteristics, and lack of word knowledge as reasons for the difficulty. The six general practices noted as most helpful by 85% of the teachers were (1) previewing concepts and vocabulary, (2) using concrete manipulatives to develop concepts, (3) requiring retellings, (4) developing summaries, (5) visualizing information, and (6) brainstorming. From these general practices specific strategies were recommended, including semantic mapping, KWL, concrete manipulatives and experiences, expository paragraph frames, group summarizing, and visual imagery.

AGNIHOTRI, R.K., & KHANNA, A.L. (December 1991/January 1992). Evaluating the readability of school textbooks: An Indian study. *Journal of Reading, 35,* 282-288.

Examines the readability levels of a Hindi social science textbook for 60 native speakers of Hindi, aged 14 to 15 years. Text difficulty was determined through readability measures and through reading comprehension, vocabulary, and syntactic complexity tests.

Readability formulas used included Fry, Smog, Flesch, Fog, and Forecast. Students also completed cloze passages over the same texts. Assessments of the students' reading comprehension, vocabulary, and syntactic ability correlated significantly with the results from the cloze test scores. All measures consistently showed the relative difficulty of the two text excerpts, but analysis of propositional and organizational structure of the two texts suggested reasons why one text was easier to understand than the other and why readers' schemata and conceptual organization are important understandings when looking at text difficulty.

COX, JUANITA M., & POE, VIRGINIA L. (1991, Summer). The math-reading connection: A graded word list to estimate mathematics ability. *Reading Improvement, 28,* 108-112.

Reports the development of a list of graded mathematical terms which could be used by teachers to quickly estimate children's reading ability in mathematics. Ten words were selected for each grade level 1 to 8. Words were selected from three widely used elementary mathematics textbooks. The graded word lists were administered to 25 children thought to be average achievers in mathematics as determined by teacher judgment and standardized test scores. Lists were revised after initial administration, after administration to an additional 25 children, and finally to an additional group of first 200 and then 220 children. Statistical analysis revealed a significant coefficient of correlation between teachers' estimates of pupils' achievement level in mathematics and their scores on the graded word list of terms. Neither teacher estimate nor scores on graded word lists correlated significantly with standardized math achievement scores. Word lists did move upward in linear relationships from grades 1 through 7.

LIPKA, CYNTHIA, & GASKILL, PEGGY. (1992, Fall/Winter). Literature-based reading instruction: Research and recommendations. *Michigan Reading Journal, 25,* 20-31.

Reviews selected research related to the history of the use of literature for literacy instruction, as well as evidence for its effectiveness. The authors present a case for effective reading materials relying on *Becoming a Nation of Readers.* In addition, they offer descriptions of literature based and basal reading instruction, summarize studies which have investigated literature based programs, offer features of literate environments, and provide guidelines for literary analyses. A study of teachers' interpretations of literature based instruction is summarized. Finally, the authors present recommendations for making the transition to a literature based program.

## V-9 Teaching—grouping/school organization

FRENCH, MICHAEL P.; ROBBINS, JANET B.; & OLIVER, J. STEVE. (1991, Winter). Placing students in instructional reading groups: A comparative investigation of five assessment techniques. *Ohio Reading Teacher, 25,* 7-16.

Compares five assessment techniques commonly used to place pupils in instructional reading groups to determine the interrelationships and correlations among the different techniques. Techniques compared were: cloze, oral accuracy, retelling, basal placement test, and total reading scores from a standardized test. Results from these assessments were compared with one teacher's ability-group arrangements for 26 third graders and the ranking of these children, high to low. Intercorrelation coefficients were calculated among the five assessment measures, and rankings resulting from performance on the five assessment measures were compared with teacher rankings. Strongest relations were found between the standardized test and the basal test and between the standardized test and the cloze exercises. The

cloze, the standardized reading test, and the basal placement test more closely approximated the teacher's grouping of students. Oral accuracy assessment and retelling had little predictive power.

STICE, CAROL F., & BARTRAND, JOHN E. (1992, June). What's going on here? A qualitative examination of grouping patterns in an exemplary whole language classroom. *Reading Horizons, 32,* 383-393.

Describes the practices, organizational patterns, and processes that led to literacy development in one whole language classroom. The study was conducted in a classroom in which 26 at-risk, second grade, innercity children were being led by a well-recognized whole language teacher. Data collected over a 60-day period included field notes of direct observations, videotapes and their transcripts, samples of children's writing, as well as notes from interviews conducted with teacher and children. Data analysis led to the construction of two models, each explicating the reality of a whole language classroom. One model focused on the teacher and various conditions of learning provided (i.e., expectations, strategies, organizational patterns, and environmental considerations); the other focused on children's learning as affected by various conditions. Although data are not presented, it is reported that the children scored as well on standardized tests as did children in traditional classrooms.

WINTER, SAM. (1991, March). What really happens during a paired reading project? *British Journal of Special Education, 18,* 20-24.

Reports a study conducted with 10- and 11-year-old pupils in two English language primary schools in Hong Kong who took part in concurrent peer tutor workshops involving the use of paired reading (PR) techniques. Tutees chose a tutor with whom they wanted to work. Tutors and tutees were taught PR techniques and then worked for 10 minutes at the start of each school day for 6 weeks. Teachers supervised the tutors' performance and collected pre- and posttest data with the GAP Reading Comprehension Test. Tape recordings of selected sessions were analyzed to determine adherence to training procedures. Eleven features of tutor behavior were found during the recorded sessions. Tutors failed to follow some procedures they had learned in training, specifically failing to praise or to correct errors. Tutors modeled behaviors but not in the way they had been taught. No relation was found between tutor behaviors and reading gains made by tutees. Adherence to PR procedures had little impact on the effectiveness of tutoring.

HOLLINGSWORTH, PAUL M., & HARRISON, GRANT V. (1991, Fall). Comparing whole class with traditional grouping: First grade reading instruction. *Reading Improvement, 28,* 183-187.

Compares the reading achievement of 40 first graders receiving whole class instruction using an instructional approach called the Companion Reading Program (CRP) with that of 40 first graders taught in ability groups with basal readers. All subjects were randomly assigned to treatments and pretested with the MRT. At the end of the school year, the SRA Reading Test, Level 21, and the Woodcock Reading Mastery Tests were administered. Children in the CRP scored significantly higher ($p < .001$) than the control group on both measures; in addition, when pupils whose scores fell in the first and fourth quartiles of the MRT were compared, the CRP group again scored significantly higher ($p < .001$) than comparable pupils in the basal reading program. Oral reading rates for CRP children in the first and fourth quartiles of the MRT were almost double those of the basal group.

SLAVIN, ROBERT E.; MADDEN, NANCY A.; KARWEIT, NANCY L.; DOLAN, LAWRENCE J.; & WASIK, BARBARA A. (1991, September). Success for All: Ending reading failure from the beginning. *Language Arts, 68,* 404-409.

Describes a beginning literacy program for schools serving disadvantaged children. Titled Success for All (SFA), the program emphasizes prevention of reading failure through early intervention. The program depends on one-to-one tutors who provide daily 20-minute sessions, follow classroom objectives, and serve as additional language arts teachers to reduce class size. During reading/language arts period, children are assigned by reading performance to cross-grade groupings and taught in whole class groups. Aspects of the program include work with story retelling, thematic content, language development, cooperative learning, instruction in letters and sounds, and composing. Evaluation for placement and program changes are held at 8-week intervals. In addition to reading teachers and certified tutors, parent liaisons, counselors, vice-principals, special education staff, and a program facilitator may be part of the team. In seven schools in which the program has been evaluated, SFA pupils outperformed matched controls on measures of reading achievement (Durrell Oral and Silent Reading and WRMT). Differences were greater for those in the lowest quartiles on the pretests. In one school with 3 years of program implementation, no child in third grade scored 2 years below grade level, as compared with 10% of control group pupils who did.

## V-10 Corrective/remedial instruction

PALINCSAR, ANNEMARIE SULLIVAN, & KLENK, LAURA. (1992, April). Fostering literacy learning in supportive contexts. *Journal of Learning Disabilities, 25,* 211-225, 229.

Discusses the purposes and procedures of two ongoing research projects designed to teach children having school-related difficulty to engage in intentional learning. The programs of instruction described were rooted in developmental and cognitive theory and research, as well as emergent literacy theory. The social nature of learning was emphasized, with a focus on the role of the teacher, the form of discourse, and the role of text in literacy instruction. Results to date show that children with learning disabilities benefit from strategy instruction occurring within classrooms that support collaborative discourse, the flexible application of comprehension strategies, and appropriate, meaningful opportunities for reading and writing.

HARRIS, KATHLEEN C.; RUEDA, ROBERT S.; & SUPANCHECK, PHYLLIS. (1990, July/August). A descriptive study of literacy events in secondary special education programs in linguistically diverse schools. *Remedial and Special Education, 11,* 20-28.

Examines the linguistic and interactional features of print-related activities in high school special education programs in three linguistically diverse schools in Los Angeles County, California. Descriptive data were collected through participant observation in 15 special education classrooms and through unstructured interviews. Research assistants also collected classroom work samples. Data were collected over a 3-month time period, with approximately 120 hours of observation at each school. Field notes were analyzed in four stages, with events analyzed for language, content of printed material, interactional structure, nature of initiations, focus of discourse, and teachers' objectives. Data revealed that English materials were used predominantly, the materials were academically oriented. They were used by students and teachers in a teacher-to-student or student-working-alone interac-

tional structure, English was used as the language of instruction, and most instructional talk was initiated by the teachers. Instructional implications are presented.

LEVINE, DANIEL U. (1992). Implementation of an urban school-within-a-school approach. In Hersholt C. Wasman, Judith Walker deFelix, James E. Anderson, & H. Prentice Baptiste, Jr. (Eds.), *Students at risk in at-risk schools: Improving environments for learning* (pp. 233-249). Newbury Park, CA: Corwin Press.

Describes the implementation and outcomes of the Kansas City School-Within-a-School (SWAS) program. The program was established to help ninth graders with low reading scores improve their comprehension and succeed in academic courses. The SWAS program assigns 60 to 100 students to receive instruction from 4 of 5 teachers of English/language arts, math, reading, social studies, and science. Placement in the program is based on grades, teacher and counselor judgment, attendance, and scores on the DRP. Stress is placed on instructional strategies for improving comprehension. An earlier evaluation of the SWAS program revealed that the average attendance during 1987-1988 was 88%; in addition, 484 of 491 students enrolled in ninth grade in 1985-1986 were still in school 2 years later. Observations carried out by district evaluators have indicated that comprehension activities appear in a majority of lessons. A questionnaire returned by 15 of the 30 SWAS teachers indicated that 8 of 13 comprehension strategies were used at least sometimes. Respondents indicated that they had used the DRP scores in planning instruction, and a number felt they had been very or somewhat successful in matching materials with students' DRP scores.

BEAN, RITA M.; COOLEY, WILLIAM W.; EICHELBERGER, R. TONY; LAZAR, MERYL K.; & ZIGMOND, NAOMI. (1991, December). Inclass or pullout: Effects of setting on the remedial reading program. *Journal of Reading Behavior, 23,* 445-464.

Describes the remedial reading instruction received by pupils assigned to either inclass or pullout programs. One hundred nineteen fourth and fifth graders were observed over a 4-month period in an urban school system where pullout and inclass remedial programs existed concurrently. In pullout settings, students left their developmental classrooms to receive instruction from the reading specialists. Pupils received instruction for 100 minutes per week. In the inclass setting, specialists went into the reading classroom, observed for half of the period to determine classroom focus and pupil needs, and then worked with the pupils for the remainder of the time. Observational data were collected over a 16-week period with the System for Observing Reading Instruction, a time sampling observation protocol. Data were collected on teacher behaviors, the lesson cycle, and pupil behaviors. Pupils received more instruction from the teacher in pullout programs and spent less time in noninstructional activities. More time was spent in skill related lessons in pullout programs, whereas more time was spent in independent activities in inclass programs. More text related activities occurred during reading in pullout settings and after reading in remedial inclass settings. In pullout programs, more subjects worked with workbooks, worksheets, and trade books, whereas in inclass settings, subjects worked with workbooks or worksheets and basals. Listening, transcribing, and silent reading were the most frequent activities of both programs. Overall, there were differences in the experiences subjects received in the two settings.

HOLLAND, KATHLEEN E. (1991). Bringing home and school literacy together through the Reading Recovery program. In Diane E. DeFord, Carol A. Lyons, & Gay Su Pinnell (Eds.), *Bridges to literacy: Learning from Reading Recovery* (pp. 149-167). Portsmouth, NH: Heinemann.

Explores and describes characteristics and changes in the family literacy contexts of 13 children who were participating in a Reading Recovery program and were followed for 1 school year. Parent interviews were done four times during the project: prior to beginning the program, twice during the program, and following the completion of the Reading Recovery tutoring. Open-ended and prompt questions were used and all interviews were audiotaped and transcribed. The seven teachers involved also were interviewed at the beginning and end of the school year. Based on the data collected, family literacy support was organized into eight roles: models, providers, readers, spellers, listeners, scribes, receivers, and interpreters. Family-owned reading materials consisted of Golden Books, Walt Disney books, Sesame Street books, and popular TV cartoon characters books. The school served as a major source of children's reading and writing materials, with literacy materials sent home by the teachers being read independently at home. When children were released from the program and books were no longer being sent home, they often were left with nothing they could read as the family-owned trade books and library books were too difficult to handle. Parents sometimes expressed fear of school, teachers, and teachers' judgments. Three of the teachers were characterized as passive in communicating with the home, while four were termed active. Active teachers were personal, persistent, and flexible in communicating. They made phone calls, sent notes and invitations, and used face-to-face encounters; if one form of communication did not work, they used another until parents responded. Observations of the classroom by parents helped them better understand their own role as well as the purpose of the program.

WISE, BETH S., & SHAVER, JUDY C. (1990). Achieving excellence in reading: Where do we begin? In Bernard L. Hayes & Kay Camperell (Eds.), *Achieving excellence in reading* (pp. 97-103). Athens, GA: American Reading Forum.

Tests the effectiveness of an early intervention program for at-risk kindergarten children from four Chapter 1 schools. In each of the four schools, 36 kindergarten children who received the lowest scores on the Boehm Test of Basic Concepts (pretest) were randomly assigned to one of two groups. The instructional treatment for the experimental group was delivered by tutors in groups of three for 30 minutes daily for 8 months and was supervised by the program director. Basic concepts were presented for the first 15 minutes using concrete manipulatives and progressing to individual worksheets. The remaining 15 minutes were spent on reading trade books aloud to children. New vocabulary, concepts, story frameworks, sequencing, and characterization were discussed with the children through predicting and problem-solving. The control group received no special treatment. Significant differences in pre- to posttest gains were found in favor of the experimental group in two of four schools. The intervention program could be easily employed through the use of volunteer adults and may have long term effects that increase children's confidence, language usage, and self-image.

ROSS, ELINOR P. (1991). Language experience in a family literacy project. In Timothy V. Rasinski, Nancy D. Padak, & John Logan (Eds.), *Reading is knowledge* (pp. 29-36). Pittsburg, KS: College Reading Association.

Tests the effects of using the LEA approach with low reading groups in primary classrooms. The year-and-a-half study was conducted at an elementary school in rural Tennessee and involved kindergarten and first grade children during the first phase and pupils in grades 1 and 2 during phase 2. Intervention activities were scheduled for two low reading groups (n=8) who were pulled out from each of two grades for 30 to 45 minutes per week. University faculty supervised the intervention which was delivered by six research assistants. The language experience lessons included introductory experiences, discussions, chart writing from pupil dictation, chart reading, and follow-up activities. Pre- and posttesting

were conducted on sight words and story sequencing. Significant differences between control and treatment groups were not found for phase 1. After a year, first grade results were significant in favor of the experimental group on both posttests and on the sequencing posttest for the second graders. Observations noted improvement in the children's ability to dictate complete sentences and their use of language. Carryover of the approach into the primary classrooms was unsuccessful.

FARMER, MARY E.; KLEIN, RAYMOND; & BRYSON, SUSAN E. (1992, March/April). Computer-assisted reading: Effects of whole-word feedback on fluency and comprehension in readers with severe disabilities. *Remedial and Special Education, 13,* 50-60.

Examines the efficacy of a program providing whole word synthesized speech feedback of unknown words to adolescents with severe reading disabilities. Volunteering for the program were 14 students ranging in age from 13.10 to 18.10, all of whom were reading at least 2 years below expected grade level and were of average intelligence as identified by the WISC-R. Subjects were presented with 36 stories on a computer. For half of the stories, the computer was programmed so that a student could request the pronunciation of an unknown word and it would be presented via synthesized speech; for the other half of the stories, the speech function was not available but students were encouraged to highlight words they were unsure of. Sessions were scheduled 3 times weekly over a period of 7 weeks, with each session usually lasting 20 to 30 minutes. Subjects were checked for word recognition approximately once a week. An interest questionnaire followed the completion of the program. Five students completed all 36 stories, while three completed fewer than half. No support was found to indicate that words requested and pronounced during the reading sessions were read more correctly than words that had been identified as unknown by students but not pronounced for them.

WEINSTEIN, GLORIA, & COOKE, NANCY L. (1992, Winter). The effects of two repeated reading interventions on generalization of fluency. *Learning Disability Quarterly, 15,* 21-28.

Explores the effects of alternative procedures on the development of fluency in pupils with learning disabilities. Subjects were four males ranging in age from 7 to 10 years who were enrolled in an elementary school, three as second graders and the fourth as a third grader. They were classified as LD, had a mean full-scale IQ score within the average range (WISC-R), and had reading achievement levels ranging from 1.0 to 3.0 (Brigance Word Recognition Test). Passages from the Merrill Reading Program III, Level A, were used for training, and a multitreatment, single subject research design was applied. Two interventions were used: (1) repeated readings with a mastery criterion of 90 correct wpm, and (2) repeated readings with the mastery criterion based on three successive fluency improvements. Correct wpm scores, the dependent measure, were determined for each subject in baseline and intervention phases and compared across conditions. Results confirmed that both types of criteria resulted in fluency gains for all, with a mean gain of 58% under the improvements condition and 62% under the fixed rate condition. The successive improvements criterion appeared to be the more efficient and showed consistent positive effects of fluency gains on generalization to unpracticed passages.

WOLERY, MARK; AULT, MELINDA JONES; GAST, DAVID, L.; DOYLE, PATRICIA MUNSON; & MILLS, BETH M. (1990, September/October). Use of choral and individual attention responses with constant time delay when teaching sight word reading. *Remedial and Special Education, 11,* 47-58.

Evaluates the effectiveness of a constant time delay procedure on sight word acquisition of four pupils and compares the use of choral spelling (all pupils spelled the word before the target pupil read it) with individual attention response spelling (only the target pupil spelled the word before reading it) on observational and incidental learning when constant time delay was used. Subjects were assessed on their ability to read their target words, to read the words taught to the other children, and to spell their own words and the words taught to others. Results suggest that constant time delay was effective in teaching word reading with minimal errors. Words taught with an individual spelling attention response were learned in fewer sessions and with lower error percentages than words taught with choral spelling, although choral attention responses resulted in children learning to spell other pupils' words more effectively than did the individual attention responses. Both observational and incidental learning occurred for all children.

VAN BON, WIM H.J.; BOKSEBELD, LIDWIEN M.; FREIDE, TONNEKE A.M. FONT; VAN DEN HURK, ARDINE J.M. (1991, October). A comparison of three methods of reading-while-listening. *Journal of Learning Disabilities, 24,* 471-476.

Compares the effectiveness of three methods of reading-while-listening (RWL). Subjects were 36 backward readers from 3 schools for LD children in the Netherlands. The sample, which had a mean IQ of 93.6, had received 3 years of reading instruction but had achieved a level that approximated that of children who have received 8 months of instruction. Subjects were divided into three conditions, each of which required them to read while listening to tapes of materials written one level above their reading level. The Standard condition involved RWL to two different texts during 4-day training sessions. The Error Detection condition involved RWL to two different texts during training sessions, but the written texts contained word mismatches with the taped texts, and subjects had to identify the mismatches by crossing them out as they encountered them in the written material. The Repeated Reading condition involved RWL to the same text during the training session period. During the 7-week span of the study, all subjects experienced each condition for a period of 2 weeks. MANOVA with repeated measures procedures applied to a variety of pre- and posttest data revealed no significant interaction effects between treatment and time and no significant main effects for treatment. Reading the same text did not result in better performance than reading different texts. Addition of an error detection task neither increased nor decreased the effectiveness of RWL. Repeated RWL did produce increased speed in reading familiar texts, but this outcome did not transfer to new reading situations.

BETTENDORF, MARGARET. (1992, March). Teaching critical thinking skills to at-risk secondary students. *Florida Reading Quarterly, 28,* 30-33.

Details a study conducted with 17 eleventh grade students enrolled in a compulsory remedial reading class in a suburban high school serving a low- to mid-socioeconomic residential area to determine if teaching critical thinking skills influences the comprehension scores of at-risk students. Subjects participated in eight 2-day critical thinking lessons over an 8-week period. Each lesson lasted 20 minutes, and a different thinking skill was taught each week. Subjects took the reading comprehension subtest of the SDRT as pre- and posttest measures. Significant differences were found between pre- and posttest means, with 12 of the 17 subjects improving their comprehension scores. Three conclusions are drawn: teaching critical thinking skills may improve comprehension scores of at-risk learners, scores improve when instruction follows a developmental sequence, and specific critical thinking strategies do work with low achievers.

BRUCE, MERLE E., & CHAN, LORNA K.S. (1991, September/October). Reciprocal teaching and transenvironmental programming: A program to facilitate the reading

comprehension of students with reading difficulties. *Remedial and Special Education, 12*, 44-54.

Describes an evaluation of two metacognitive approaches, reciprocal teaching and transenvironmental programming, for developing the comprehension skills of seven Australian pupils with reading difficulties. Subjects, ages 11 to 12, received part-time remedial instruction from a resource teacher on a pullout basis. Data were collected from three settings: reciprocal teaching in the resource room, generalization of strategy use in the homeroom reading class, and generalization of strategy use in the homeroom social studies class. Reciprocal instruction and assessment in the resource room took place over 30 sessions. Then similar comprehension tasks in reading and social studies were used to see the measure of generalization of strategy use from the resource room to the homeroom classes. Comprehension answers on passages were analyzed for percentage correct on the total number of questions, percentage correct on main idea questions, and percentage correct on detail questions. Scores were determined for the baseline stage, the reciprocal teaching phase, the maintenance phase, and the transfer of learning to homeroom classes. Performance improved through the various stages and were maintained, suggesting that reciprocal teaching was a worthwhile intervention for these pupils. While data support the usefulness of transenvironmental programming, differences in setting were found, as programming was more successful in the social studies setting than in the reading setting. Anecdotal evidence revealed subjects spontaneously transferred the processes to other school subjects besides those targeted.

CHAN, LORNA K.S. (1991, August/September). Promoting strategy generalization through self-instructional training in students with reading disabilities. *Journal of Learning Disabilities, 24*, 427-433.

Examines the effects of strategy generalization instruction on the comprehension performance of students with reading disabilities. A total of 60 subjects from three different schools in Australia participated in this study. There were 20 grade 5 and 6 pupils with reading disabilities (reading disability group), 20 average readers in grade 3 (RA-matched group), and 20 average readers in grades 5 and 6 (CA-matched group). They were randomly assigned to either a standard instruction or a generalization induction condition. Reading ability was assessed on the St. Lucia Graded Word Reading Test, an individual test of oral word reading. A 3 (subject group: reading disability, CA match, RA match) x 2 (instructional type: standard, generalization induction) x 3 (testing condition: pretest, cued, uncued) repeated measures design was employed. Informed training and self-instructional training techniques were used to promote generalization of strategy use. There were five daily 40-minute training sessions, one on each of five topics: deleting redundant information, deleting trivial information, rating sentences in order of importance, identifying explicit main ideas, and identifying implicit main ideas. Training materials consisted of paragraphs of expository text on a range of topics. Subjects were posttested on three dependent measures developed by the researcher: identification of main ideas, rating of importance of sentences in the text, and comprehension competence. They were tested under both a cued and an uncued condition. Data were analyzed using ANOVA procedures. Results indicated that the self-instructional training succeeded in facilitating the identification of main ideas among pupils with reading disabilities and in helping them to maintain their improved performance when they were no longer prompted to use the strategy in a transfer setting (uncued testing).

FOLEY, CHRISTY L. (1992, February). Evaluating the use of prediction: An experimental study with junior high remedial readers in individualized and small group settings. *Journal of Research in Reading, 15*, 28-38.

Explores the use of prediction during silent reading of short stories with a surprise ending. The effects of instructional setting and content familiarity on readers' interest and comprehension also were examined. Subjects were 54 junior high school remedial readers. The subjects read stories at three levels of content familiarity: familiar, neutral, and unfamiliar. Each story had a surprise ending, and each was written at the fourth grade level of difficulty. Reading of the selections was performed within one of three treatment groups: small group, individualized, or control. Subjects in the small groups and the individualized setting were encouraged to generate predictions at both the midpoint and prior to the climax of each selection they read, while subjects in the control group read without instructions to predict. Upon completing the reading of each selection, all subjects responded to an interest inventory and a comprehension test consisting of literal and inferential questions. Results of repeated measures ANOVA procedures performed on the data indicated that degree of content familiarity did not dramatically influence literal, inferential, or overall comprehension. Interest scores on both the familiar and neutral stories significantly exceeded interest scores on the unfamiliar story. Both interest and inferential comprehension were negatively influenced by instruction to predict. In comparison to controls, students in both prediction treatment groups had difficulty accurately predicting and supporting their predictions. Students also did not usually change midpoint predictions, regardless of additional comprehension clues that could be derived from further reading. Textual evidence was rarely used to support hypothesized predictions.

DAY, JEANNE D., & ZAJAKOWSKI, AMY. (1991, August/September). Comparisons of learning ease and transfer propensity in poor and average readers. *Journal of Learning Disabilities, 24,* 421-426, 433.

Compares both assisted and unassisted performances of average and LD learners on a reading comprehension task, stating the main idea in expository paragraphs in which the topic sentence was either first, last, or missing. Subjects were 28 fifth graders (14 average readers and 14 LD) from a predominantly white, middle-class school district. Average readers were nominated by teachers who judged them to have average intelligence and grade level reading achievement. All subjects were trained to find the main idea in one- and two-paragraph texts and took pre- and posttests in which they were asked to write the main ideas contained in one- and six- to eight-paragraph texts. The main ideas were either explicitly stated or implicit. MANOVA testing revealed only two significant effects: test time and topic sentence placement. Performance improved from pre- to posttest, although the effect of topic sentence placement was evident at both test times. Performance on paragraphs with topic sentences first was better than on those with topic sentences last, which was, in turn, better than performance on paragraphs without topic sentences. Although average achieving children and LD children did not differ on static pre- and posttest measures, they did differ in how easily they learned to find the main idea under different topic sentence placement conditions. LD children required significantly more instruction than average readers to reach the mastery criterion.

NEWMAN, STANTON; WRIGHT, SARAH; & FIELDS, HEATHER. (1991, June). Identification of a group of children with dyslexia by means of IQ achievement discrepancies. *British Journal of Educational Psychology, 61,* 139-154.

Designs a study using cluster analysis to determine whether a discrete group(s) of children with large discrepancies between ability and achievement could be identified. Subjects were a subset of children taking part in a longitudinal study in England and included those identified as underachievers, achievers, and overachievers. The final sample consisted of 462 children who completed all the assessments in the study. Data were collected on cognitive tests, memory skills, perceptual and perceptual-motor tasks, laterality (hand,

foot, and eye preference), and spelling (Schonell Spelling Test). In addition, teachers and parents were interviewed. For each subject, six discrepancy scores were created based on the difference between the standard scores on two measures of ability (WISC-R Verbal and Performance IQ) and three measures of achievement (NART, Schonell Reading, and Schonell Spelling). Discrepancy scores were subjected to cluster analysis. Five distinct groups were found: two whose reading achievement was at a level higher than that predicted by their IQ, two whose performance was close to prediction, and a group whose achievement fell significantly below ability. This last group consisted of 11% of the sample and showed performance on all four reading and spelling measures consistent with their being termed dyslexics. Analyses indicated that the cluster analysis approach identified different children from those identified by a simple examination of reading performance. A further cluster analysis was conducted on this group using the cognitive variables. Two groups emerged, one performing less well on all cognitive measures and also on the emotional variables. This latter group performed significantly less well in all reading and spelling tests. It is contended that the existence of qualitatively different subtypes of dyslexia remains in question.

SCULLY, MARY J., & JOHNSTON, CHRISTOPHER L. (1991, October). The use of an educational therapy model with an illiterate adult. *Journal of Reading, 35*, 126-131.

Presents the case study of one functionally illiterate adult whose remedial treatment was based on an educational therapy model, an approach to remediating learning problems through the establishment of a personal relationship between the therapist and the client. The subject was 49 years old and sought instructional assistance to allow him to maintain his job as an assistant to physical therapists in a hospital. In initial testing, he was unable to read beyond the midprimary level. He was seen for 15 sessions of 90- to 120-minutes duration over 4 months. Remedial strategies were developed based on initial testing, strengths and weaknesses of the individual were considered, and the learner was involved in the planning. Personal concerns that emerged during the educational therapy sessions were discussed. Sessions were audiotaped and transcribed. Transcriptions of the sessions, as well as additional information obtained from the researcher's journal recordings, interviews with staff and a close friend, and a questionnaire filled out by the subject's brother were used as data sources for triangulation. Progress was identified by considering both formal and informal indicators. Reading skills (sight vocabulary and word analysis skills) improved significantly. The subject evidenced greater self-esteem and improved social relationships as he gained more confidence in himself and his abilities.

## V-11 Teaching bilingual/other language learners

BAIN, JOSIE G., & HERMAN, JOAN L. (EDS.). (1990). *Making schools work for underachieving minority students: Next steps for research, policy, and practice.* New York: Greenwood Press.

Presents papers from a conference held under the auspices of the Center for Research on Evaluation, Standards, and Student Testing (CRESST). The focus of the conference was the problems of underachieving minority students and various efforts to create solutions. A series of short papers are included beginning with several focused on the current status of education for underachieving minority students and the unique problems connected with it. A second section deals with overviews of promising approaches addressed to specific problems. Issues of evaluation and testing form the core of a third segment of the text, with successful collaborative arrangements described in a fourth section. Included in

the chapters, each of which is written by a different author, are brief reports of evaluations of programs as well as reviews of selected research.

ELLEY, WARWICK B. (1991, September). Acquiring literacy in a second language: The effect of book-based programs. *Language Learning, 41,* 375-411.

Reviews nine studies on the effects of implementing book-based programs on the acquisition of literacy in second language situations, contrasting the findings of programs that rely heavily on the Tate Syllabus, an audiolingual program based heavily on structural linguistics, and programs that involve immersion in meaningful text, incidental language learning, integration of oral and written language, focus on meaning rather than form, and high intrinsic motivation. Primary focus is on studies conducted in Niue, Fiji, and Singapore, with lesser focus on studies of students in the United States, Pakistan, French Canada, and Israel. Results from all studies suggest that children learning a second language show rapid language growth when the five principles of immersion (incidental learning, integration, meaning focus, extensive input of meaningful print, and intrinsic motivation) are applied to the language learning situations.

CAREY, STEPHEN T. (1991, July). The culture of literacy in majority and minority language schools. *Canadian Modern Language Review, 47,* 950-976.

Reports a series of Canadian research projects designed to investigate additive bilingualism in majority and minority language schools. Projects employ within-groups and between-groups research designs to clarify problems in previous research studies. Findings suggest that success with first language learning may breed success with second language acquisition. Language learners who have not mastered communication skills in their first language are less likely to master communication skills in a second language.

COTTERALL, SARA. (1990, December). Developing reading strategies through small-group interaction. *RELC Journal, 21,* 55-69.

Examines the effects of an interactive reading strategy training program on ESL students' learning from English texts. Subjects were four adult ESL students participating in a preuniversity English proficiency course. The four students worked with one instructor for 1 hour each day for 20 days. Daily training and practice encompassed a four phase interactive teaching strategy which required each student to: (1) clarify difficulties pertaining to a given passage, (2) locate and state the main idea of the passage, (3) summarize the content of the passage, and (4) predict the likely content of the next passage. Analyses included a consideration of daily reading comprehension assessments, pre- and posttest comparisons of skills learned throughout the training sessions, and qualitative evaluation of transcripts of various interactions acquired during the training sessions. Findings indicated all subjects benefited from interactive strategy training. The technique encouraged active participation in reading and generalized to other material. Factors inhibiting interaction were differences in L2 proficiency levels, personality differences among participants as well as preference to read silently, and the constant presence of the instructor.

HUDSON, THOM. (1991, Spring). A content comprehension approach to Reading English for Science and Technology. *TESOL Quarterly, 25,* 77-104.

Reports the development of materials for and the subsequent evaluation of student success in a Reading English for Science and Technology project in the chemical engineering department of the Universidad de Guadalajara. Materials were developed around thematic units for the course content. Emphasis was placed on integrating an individual's reading strategies and motivation while reading for comprehension of content. Grammar and vocabulary instruction was introduced only as it was necessary for student comprehension

of the materials for the course, instead of as instruction in separate, isolated skills. Students took one of three reading tests at the beginning and end of each year. Each test form included a grammar test, a reading comprehension test, and a multiple-choice cloze test. Scores were higher for the groups receiving content comprehension on each subtest of each test form, with highest scores on the reading comprehension subtests. Results suggest that the content comprehension approach improves overall comprehension as well as grammar and general reading ability.

TANG, GLORIA M. (1991, Spring). ESL student perception of student-generated graphics as a reading strategy. *Reflections on Canadian Literacy, 9,* 2-9.

Investigates whether teaching ESL students to generate a tree graph to represent a classification text pattern in social studies content facilitates student understanding of text and increases student perception of and attitude toward student-generated graphics as a valid reading strategy. Forty-five students from a wide variety of nationalities participated in a two-part study with 22 in the experimental group and 23 in the control group. Students explicitly taught to represent a text passage graphically recalled more information from the passage and had more understanding of the classification structure than did controls. Results from semistructured interviews suggested that the majority felt the techniques helped them understand the text information; in addition, most had a positive attitude toward student-generated graphics as a reading strategy.

ANDERSON, NEIL J. (1991, Winter). Individual differences in strategy use in second language reading and testing. *Modern Language Journal, 75,* 460-472.

Examines individual differences in strategy use by adult second language learners while engaged in two reading tasks: taking a standardized reading comprehension test and reading academic texts. Participants were 28 Spanish speaking students enrolled in a university level, intensive ESL program in the southwestern United States. They represented three levels of English proficiency: 9 at beginning level, 10 at intermediate level, and 9 at advanced level. Materials for the study consisted of one standardized reading comprehension test, Forms A and B of the Descriptive Test of Language Skills-Reading Comprehension (DTLS), and a reading task comprising two passages selected from freshman level textbooks, the Textbook Reading Profile (TRP). Subjects were randomly assigned to two groups, with one group taking Form A of the DTLS, and the other group taking Form B under standard conditions. Following training and practice in think-aloud procedures, each was tested on the TRP individually and asked to report the strategies used in reading the passages and in answering the comprehension questions. They were allowed to produce think-aloud protocols in L1 (Spanish) or L2 (English). Responses were audiotaped and translated into English for analysis. Subjects were then tested on the alternate form of DTLS individually so that think-aloud protocols (in L1 and L2 and translated for analysis) generated in the context of standardized testing could be collected. Both qualitative and quantitative data analysis were performed. Findings revealed that there was no single set of processing strategies that significantly contributed to success on the two reading measures. Readers scoring high or low appeared to be using the same kinds of strategies while reading and answering comprehension questions on either measure. However, strategic reading was determined to involve not only knowing what strategy to use, but also orchestrating the use of a range of strategies.

FAGAN, WILLIAM T.; TAVERNER, DAVID; & JONES, LILIANE. (1991, Fall/Winter). Transfer in French immersion: A case study. *Reflections on Canadian Literacy, 9,* 204-207.

Describes a study of one child's achievement levels and processing strategies as a result of continued instruction in a French immersion program. The subject, whose native language was English, had received 80% to 90% of his instruction in French since first grade. Midway through fifth grade, he was referred to the Reading and Language Centre at the University of Alberta for help in reading and writing in French and English. At the center, he was administered a battery of French and English tests of oral reading, silent reading, word identification, spelling, and phonics. Both quantitative and qualitative methods of evaluation were applied to the test data. Findings revealed that he received lower scores in French than in English on tests of words in isolation, words in context, spelling, and silent reading comprehension. Although French and English performance levels were similar in oral reading comprehension and knowledge of phonics, he differed in the nature of processing in which he engaged in each language. Results suggested that knowledge and strategies for obtaining meaning learned in either language were transferred to the other language.

BAIN, BRUCE, & YU, AGNES. (1991, July). Qin, Han, and Huang: Text reproduction and literacy in rural China, a case for Euclid and Homer. *Canadian Modern Language Review, 47,* 861-877.

Investigates, through a case study format, text recall of narrative heard in a foreign language that was learned through literacy classes as opposed to classes in oral rhetoric. The three subjects, Qin, Han, and Huang, are male peasants in rural China. Qin and Han are literate, having learned Putonguah (a foreign language for a majority of China's population) through a literacy course. Huang is illiterate, but learned to speak Putonguah through classes in oral rhetoric. A version of *The Lonesome Opossum* was presented to Qin in written Putonguah, and to Han and Huang in oral Putonguah. All three were asked to retell it as soon as they had learned it, and again 3 months later. Retellings at both intervals were taped for analysis. Initial retellings were complete and accurate for each of the three subjects. Three months later, however, the two literates were not able to recall many details in the narrative, but the nonliterate was able to recall the entire tale. Findings go contrary to the theory that "symbolic technologies push cognitive growth earlier and longer."

## V-12 Tests and testing

HIEBERT, ELFRIEDA H., & HUTCHINSON, TERRY A. (1991, December). Research directions: The current state of alternative assessment for policy and instructional uses. *Language Arts, 68,* 662-668.

Reviews the literature on alternative assessment, demonstrating that the uses and problems connected with alternative assessment are different for educational policymakers and for classroom instructors, and suggesting the need for evaluation and curriculum specialists to work together to meld systems that would take into account the needs of both groups.

PETERSON, DANIEL; STEGER, HELEN S.; SLATE, JOHN R.; JONES, CRAIG, H.; & COULTER, CORA. (1991, July). Examiner errors on the WRAT-R. *Psychology in the Schools, 28,* 205-208.

Samples 55 WRAT-R protocols completed by nine practitioners in a metropolitan school district to determine if errors existed in scoring. All nine made errors. Errors occurred on 95% of the protocols, with an average of 3.0 errors per protocol. Errors included failure to obtain correct ceiling or basal, and failure to record responses. Errors resulted in changes in 11 standard scores and 3 grade equivalent scores, leading the researchers to

conclude that there was a lack of objectivity in scoring and in impact on subsequent diagnostic decisions.

WEBSTER, RAYMOND E., & BRASWELL, LOUISE A. (1991, July). Curriculum bias and reading achievement test performance. *Psychology in the Schools, 28,* 193-199.

Compares the standardized test performance of 62 second grade pupils reading in two different reading series to determine the degree to which reading achievement test scores vary according to the reading instructional program. Tests included the reading subtest scores from the Kaufman Test of Educational Achievement-Brief Form, the WRAT-R, the Reading Recognition and Reading Comprehension subtests from the PIAT, and the grade level equivalents and scaled scores from the CAT. Three curriculum times test repeated measure ANOVAS were conducted using grade level scores (2 x 7), standard scores (2 x 4), and CAT scaled scores (2 x 5) as dependent measures. Ranges in standard scores suggested a high degree of between-subject variance, supporting the notion of content validity and item gradient differences across tests. Significant main effects were noted for reading curriculum, achievement test, and curriculum by achievement test interaction, suggesting variability as a function of the specific test used and the kind of reading instructional program.

GOMEZ, MARY LOUISE; GRAUE, M. ELIZABETH; & BLOCH, MARIANNE N. (1991, December). Reassessing portfolio assessment: Rhetoric and reality. *Language Arts, 68,* 620-628.

Considers the historical and social contexts out of which the portfolio assessment movement has developed and examines the advantages and the constraints for teachers who attempt to implement portfolio use in their classrooms. One teacher's efforts with portfolios are chronicled to demonstrate both the importance of using portfolios and the problems that portfolios can introduce. Questions to consider when planning alternative assessment are included.

STEELE, JEANNIE L., & MEREDITH, KURT. (1991, Winter). Standardized measures of reading achievement for placement of students in Chapter 1 and learning disability programs: A nationwide survey of assessment practices. *Reading Research and Instruction, 30,* 17-31.

Reports findings from a nationwide survey to determine measures used to diagnose reading difficulties and place students in learning disability or Chapter 1 classes. Two surveys were sent to state directors of special education and coordinators of Chapter 1 services. Surveys asked if standardized measures were used to determine eligibility, if they were required, what the measures were, who made the decision regarding what measures to use, what placement criteria were used and who determined the criteria, and if other than standardized measures were used. Data were received from 43 Chapter 1 coordinators and 42 special education directors. Most states required standardized measures but did not mandate which measure was used. Six states reported mandates. Five tests were used most frequently: the WRMT, WJPEB, WRAT, PIAT, and the Brigance Diagnostic Inventory of Basic Skills. Generally, decisions were made at the local district level. Most states used discrepancy indices and cutoff scores. Most did not rely exclusively on standardized measures to determine eligibility. Other measures included teacher recommendations, criterion-referenced measures, classroom observations, other tests, estimates of motivation, and family income. Eligibility was determined annually in most states. Pretests/posttests generally were used to determine growth. Two questions on the special education survey verified the use of group administered reading achievement tests and IQ measures to determine eligibility.

PARKER, RICHARD; HASBROUCK, JAN E.; & TINDAL, GERALD. (1992, Winter). Greater validity for oral reading fluency: Can miscues help? *Journal of Special Education, 25,* 492-503.

Compares the criterion validity of traditional oral reading fluency (ORF), or number of words read correctly per minute, with two types of miscue based assessment procedures. Miscue based assessment procedures included: (1) ORF modified to include only meaning change miscues (ORF-M), severe meaning change miscues (ORF-S), and uncorrected miscues (ORF-U); and (2) oral reading accuracy (ORA), or percentage of words read correctly under no time consideration, also based on meaning change miscues (ORA-M), severe meaning change miscues (ORA-S), and uncorrected miscues (ORA-U). Subjects included 22 children each from fourth, fifth, and sixth grades. At each grade level, 11 pupils were selected from the lowest regular classroom reading groups and 11 from those receiving special education or Chapter 1 assistance. Dependent measures, including the Analytic Reading Inventory, three maze passages (with readabilities at grade level, one year above grade level, and one year below grade level), timed oral reading of the same three passages, and teacher ratings of pupil ability, were administered and scored by trained examiners. Analyses included using the various accuracy and fluency measures to predict reading group placement, producing box plots with standard error notches for each measure by grade level, and intercorrelating accuracy and fluency measures with external criteria. Results did not support any modification of traditional ORF. Predictive power comparable to traditional ORF was demonstrated by ORA-S, but with reduced interscorer accuracy.

NIST, SHERRIE, L.; MEALEY, DONNA L.; SIMPSON, MICHELE L.; & KROC, RICHARD. (1990, Fall). Measuring the affective and cognitive growth of regularly admitted and developmental studies students using the Learning and Study Strategies Inventory (LASSI). *Reading Research and Instruction, 30,* 44-49.

Explores the utility of LASSI for measuring college students' affective and cognitive growth following a study strategies course, and evaluates the predictive ability of the instrument by examining students' grades in subsequent content courses. Students in two universities participated, taking the LASSI as a pre- and posttest measure in conjunction with 8 weeks of study strategy instruction. Subjects were 71 regularly admitted students and 168 developmental studies students. Significant differences in cognitive and affective growth were found for both groups after instruction. LASSI scores were good predictors of content grades for the regularly admitted students, but no scale or combination of scales was predictive of grades for the developmental studies students. Two LASSI scales and several developmental studies variables correlated with college GPA. There were significant negative coefficients of correlations between the SAT-V score and the high school GPA and moderate positive coefficients between scale score, high school GPA, and developmental studies course grades.

SIEDOW, MARY DUNN. (1991, Spring/Summer). Informal assessment of older readers' abilities. *Forum for Reading, 22,* 12-18.

Explores the utility of an informal reading inventory for assessing the reading abilities of college students enrolled in content area reading methods courses at a large state university. Students were screened with the NDRT, Form E, and those having scores below college level reading ability individually took the Advanced Reading Inventory. Instructional and frustration reading levels were determined and profiles of vocabulary and comprehension errors were constructed. Little relation was found between the NDRT and reading inventory scores for moderately or seriously disabled readers. Scoring patterns on the Advanced Reading Inventory suggest that it provides diagnostic information unavailable from the NDRT.

MENYUK, PAULA; CHESNICK, MARIE; LIEBERGOTT, JACQUELINE WEIS; KORNGOLD, BLANCHE; D'AGOSTINO, RALPH; & BELANGER, ALBERT. (1991, August). Predicting reading problems in at-risk children. *Journal of Speech and Hearing Research, 34*, 893-903.

Examines what measures are the best predictors of later reading problems for children with language disorders who might be considered at risk because of language impairment and premature birth. Subjects were 130 children between the ages of 53 and 77 months. Children were considered if their expressive and receptive language ages were at least 6 months and 12 months below their CA, or if they had earlier speech and language evaluations. Twenty-three children were classified as language impaired, 32 were in the premature group, and 87 were placed in the at-risk group. Over a 3-year period, subjects completed intake measures, language metaprocessing measures, and exit measures. Significant relations were found between measures of oral language and metaprocessing ability at the early ages and reading ability in first and second grades. Scores on the language processing battery accounted for more variance on the reading tests than did scores on standard language tests. Subjects were clustered into three ability groups and data were examined to see if group membership determined by either standard speech and hearing tests of metaprocessing battery scores predicted at-risk performance on the WRAT. Forty-six children were considered at-risk, 21 by these measures, 10 by language-processing measures alone, and 3 by intake measures alone. Twelve were not identified as potential problem readers. Results suggest that early measures are good predictors for later reading performance, but that different measures are needed for different children.

BARNHART, JUNE E. (1991, December). Criterion-related validity of interpretations of children's performance on emergent literacy tasks. *Journal of Reading Behavior, 23*, 425-444.

Presents the results from two studies of emergent literacy tasks in which these tasks were described and correlated with scores on a standardized reading readiness test in kindergarten (MRT) and scores on a reading achievement test in third grade (ITBS). Thirty-nine children were tested initially, and 34 of these same children were tested again at third grade. Study 1 assessed storybook reading reenactment, writing of isolated words, writing of words as constituents of a sentence, and storywriting and reading. Significant coefficients were found for all four emergent literacy tasks with the MRT. Study 2 followed the children beyond kindergarten to third grade, where significant coefficients were found for the four emergent tasks, the MRT, and the ITBS scores. Behaviors on the storywriting and reading task correlated most strongly with ITBS scores. Lowest relations were between behaviors on the writing of isolated words in kindergarten and scores on ITBS in third grade. Data from both studies suggest the validity of these four emergent literacy tasks and their corresponding classification schemes and a high degree of internal consistency among these informal measures.

SCHACHTER, STEVEN; BRANNIGAN, GARY G.; & TOOKE, WILLIAM. (1991, Fall). Comparison of two scoring systems for the Modified Version of the Bender-Gestalt Test. *Journal of School Psychology, 29*, 265-269.

Examines the utility of the Developmental and Qualitative Scoring Systems for the Modified Version of the Bender-Gestalt Test in predicting performance on the Developmental Test of Visual-Motor Integration (DTVMI). Subjects were 53 kindergarten and 47 first grade children attending public schools who took both tests in their classrooms on the same date. Tests were given using procedures for group administration described in other research studies. Data for each class were analyzed separately and together. The Qualitative Scoring System correlated higher than the Developmental Scoring System with

the DTVMI, with a higher correlation coefficient for the kindergarten sample than for the first grade sample. The Qualitative Scoring System appears to be preferable to the Developmental System for predicting visual-motor integration skills of kindergarten and first grade children.

SUTHERLAND, M.J., & SMITH, C.D. (1991). Assessing literacy problems in mainstream schooling: A critique of three literacy screening tests. *Educational Review, 43,* 39-48.

Presents a study of the Boder Test of Reading-Spelling Patterns, the Aston Index, and the Bangor Dyslexia Test to examine their comparability, subgrouping, and ease of use for mainstream teachers. Twenty British subjects took the three screening tests in random order. All tests were individually administered. Diagnosis across the three tests was consistent for 6 of the 20 pupils. Most agreement was found between the Boder Test and the Aston Index in the identification of auditory dyslexics. The Aston Index was very time consuming, and results were difficult for the classroom teacher to interpret. The Bangor Test appeared too general to benefit teachers. Floor effects on the Boder Test and ceiling effects on the Aston Index suggest the need for modification.

PREWETT, PETER N., & GIANNULI, MARIA M. (1991, June). The relationship among the reading subtests of the WJ-R, PIAT-R, K-TEA, and WRAT-R. *Journal of Psychoeducational Assessment, 9,* 166-174.

Determines the mean score differences, the shared variance, and the underlying structural relation among the WJ-R, PIAT-R, K-TEA, and WRAT-R, in order to provide information about their construct and concurrent validity. Subjects were 118 elementary school pupils who were attending urban and suburban schools and were referred for psychoeducational evaluation because of their lack of academic progress. All tests were individually administered. Pearson coefficients of correlation between reading subtests ranged from .78 to .98. Subtests were highly intercorrelated. A principal components analysis of the subtests yielded one factor on which each reading subtest loaded highly. For individual subjects the WJ-R and K-TEA reading tests yielded similar scores, but the PIAT-R and WRAT-R yielded significantly lower scores. Interpretation of a subject's reading skills could vary depending on which test scores were known, leading to different diagnostic impressions of pupils.

GARCIA, GEORGIA EARNEST. (1991). Factors influencing the English reading test performance of Spanish speaking Hispanic children. *Reading Research Quarterly, 26,* 371-392.

Investigates the factors influencing Spanish-speaking Hispanic children's reading test performance in English using both qualitative and quantitative methodologies. Participants were 104 fifth and sixth grade pupils, 51 bilingual and 53 monolingual speakers. A subsample of 18 participated in retrospective, open-ended interviews to explain how they determined their vocabulary and reading test answers on passages from old CAT, MAT, and ITBS tests and on a passage written for testing. Questions were classified as textually explicit, textually implicit, and scriptally implicit. Subjects also completed a prior knowledge test over the passages. Significant differences were found between the two groups in their test-specific vocabulary knowledge, in their prior knowledge, and on their reading test performance. When prior knowledge differences were controlled, no significant differences were noted in passage performance between the two groups. Responses to scriptally implicit questions differed the most between groups, with Hispanic students scoring lower on those questions. With prior knowledge controlled, the two groups did not differ significantly on textually explicit or textually implicit questions. Interview data suggest that Hispanic children knew less of the vocabulary than the test-specific vocabulary measure indicated and

had less developed schemata. Hispanic children also needed more time to complete the test than did Anglo children, but both groups were aided by the longer test administration time.

LAUFER, BATIA, & OSIMO, HELEN. (1991). Facilitating long term retention of vocabulary: The second-hand cloze. *System, 19,* 217-224.

Assesses the vocabulary retention of 30 L2 learners of English for Academic Purposes enrolled in an Israeli university. Subjects were taught 60 words in text context. Thirty words were presented in a secondhand cloze format, where subjects had to fill in the target items in a summary version of the original text, and 30 were presented through an L1 and L2 translation task. Words were taken from 6 authentic texts studied over a 10-week period, with 10 words taken from each text. Practice activities were the same for all words. An untimed test in the form of a list of target words in English to be translated into Hebrew served as the outcome measure. Words that had been submitted to the secondhand cloze test were better remembered than words that were not.

FOTOS, SANDRA S. (1991, September). The cloze test as an integrative measure of EFL proficiency: A substitute for essays on college entrance examinations? *Language Learning, 41,* 313-336.

Reviews the literature on using cloze as a measure of EFL proficiency and reports a study conducted to measure EFL proficiency in two groups of Japanese college students: English majors and nonmajors at a private university, a national university, and a women's junior college. Cloze test performance on a timed cloze instrument was correlated with essay scores from a timed written essay and with TOEFL scores to determine whether the cloze test could function as an alternative measure of integrative language ability. Degree of overlap among the three proficiency measures was investigated by multiple-regression analysis and partial correlations. The cloze test significantly correlated with the essay test and improved prediction of EFL proficiency. Use of cloze tests in their fixed-ratio deletion, exact-word scored format is recommended as a substitute for essay tests on English proficiency examinations.

TORGESEN, JOSEPH K.; WAGNER, RICHARD K.; BRYANT, BRYAN R.; & PEARSON, NILS. (1992, Winter). Toward development of a kindergarten group test for phonological awareness. *Journal of Research and Development in Education, 25,* 113-120.

Reports two studies conducted as part of the development of a new group administered test for phonological awareness in young children. In study 1, 100 kindergarten children were administered 40 items for each of three different item types (Initial Sound–Same, Count the Sounds, and Initial Sound–Different). Confirmatory factor analysis indicated that all items assessed the same underlying psychological construct. In study 2, 90 pupils were administered an experimental version of the Screening Test of Phonological Awareness (STOPA). No significant differences in internal consistency reliabilities were found between the group administered STOPA and an individually administered test of phonological awareness. Test developers concluded that a group administered phonological awareness measure could serve as an appropriate screening measure for kindergarten children, and that Count items were not as appropriate as Same and Different items for young children.

GRIFFIN, PATRICK E. (1990, November). Profiling literacy development: Monitoring the accumulation of reading skills. *Australian Journal of Education, 34,* 290-311.

Details development of a descriptive reporting scale for describing the progression of reading behavior. Almost 100 teachers, divided into four groups, participated in the

development project implemented through teacher workshops. The workshops used an analytical method which combined the identification of goals, the delineation of appropriate outcomes associated with each goal, and a range of methods of gathering information or evidence that outcomes had been achieved. The teachers collected and/or documented examples of children's reading behaviors which were then considered at the project workshop. The process of describe, observe, discuss, and revise was integral to the development of the initial statements of indicators. The resulting scale presented a progressive accumulation of reading skills, grouped together in bands. The skills listed were performance indicators of reading development. Field testing in 105 schools in Victoria revealed that the scale was reliable and had appropriate criterion validity.

PAGÉ, MICHEL. (1989). Evaluation of text reading comprehension: Results of research at the end of primary school and in junior high school. In Elisabetta Zuanelli Sonino (Ed.), *Literacy in school and society: Multidisciplinary perspectives* (pp. 159-173). New York: Plenum Press.

Describes the development of an instrument designed to assess the ability of children to comprehend informative texts at the end of grades 5 and 6 and in grades 7 and 8. The test consists of seven parts, each evaluating a different aspect of text comprehension. A total of 242 Montreal children from three different socioeconomic levels and the four grade levels took the test. Analyses of various aspects of the instrument are presented as are comparisons between groups.

EVANS, JAMES R.; MASK, NAN; & JOHNSON, CARLYLE. (1991, December). A new symbol substitution test for investigating reading disabilities. *Journal of Psychoeducational Assessment, 9*, 329-339.

Describes the development and standardization of three symbol association subtests and presents results of their use with reading disabled children in two pilot studies. The three subtests of the Tests of Verbal and Spatial Association (TVSA) are (1) Verbal-Spatial, (2) Verbal, and (3) Spatial. In standardizing the instrument, it was administered to 457 children in grades 3 to 10 in two school systems. The WISC-R Coding B subtest was also administered. Correlation coefficients between the Coding B standard scores and the TVSA subtests ranged from .31 to .49. Test/retest reliability coefficients for the Verbal-Spatial Association and Verbal Association subtests ranged from .75 to .79 for children 8 and 9 and 10 to 12 years old; for the Spatial Association subtest, the coefficients were .46 at ages 8 and 9 and .62 at ages 10 to 12. In the first pilot study, the TVSA was administered to 19 reading disabled children between the ages of 8 and 15. A control group of 19 subjects was selected randomly from the original standardization group. Experimentals scored significantly lower than controls on the Verbal-Spatial Association and Verbal Association subtests; no significant differences were found between the two groups on the Spatial Association subtest. Additional analyses revealed that 15 of the experimentals but only 4 controls fell into one of five patterns. For the second study, 10 children diagnosed as having serious reading problems were given the TVSA and score profiles were plotted. Scores of all 10 fit one of the five patterns previously identified. Overall, 38% of reading disabled subjects across both studies had scores that fit a pattern consisting of low scores on the Verbal Association test with higher and equal scores on Verbal-Spatial Association and Spatial Association. Another 21% of disabled readers were characterized by a relatively low Verbal Association score, with a high Spatial Association score and an intermediate Verbal-Spatial Association score. Other patterns with smaller numbers fitting into them were identified.

PALMER, BARBARA C.; ZIRPS, FOTENA A.; & MARTIN, NANCY A. (1992, Spring). The development of the Figurative Language Interpretation Test. *Journal of Reading Education, 17,* 11-21.

Describes two experiments guiding the development of the Figurative Language Interpretation Test (FLIT). In Experiment 1, 82 seventh, eighth, and ninth grade students and 72 adult basic education students were administered a pool of 100 multiple-choice items for the purpose of pilot testing. Fifty items asked the reader to interpret figures of speech in isolation, and 50 asked for interpretation of figures of speech in sentence context. Revision and correction of items followed the testing. In Experiment 2, reliability, validity, and normative data were compiled by administering the test to 400 fourth through ninth grade subjects. Two forms of the test were administered on consecutive days. Concurrent validity, assessed by comparing FLIT scores with Total Reading Scores from the CAT, was generally high, with correlation coefficients ranging from .51 to .83 over grades and forms. The reliability of the FLIT, assessed with split-half and alternate form procedures, ranged from .65 to .92 across grade levels, with increasing consistency in the higher grades. Alternate form reliability coefficients also were adequate, ranging from .50 to .81, and yielding an overall coefficient of .77 between forms.

JOHNS, JERRY L. (1990). Informal reading inventories: A holistic consideration of the instructional level. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 135-140). Provo, UT: College Reading Association.

Investigates word recognition and comprehension criteria at the instructional level by using total results of an IRI. Fifty-one examiners (undergraduate and graduate students in reading courses and classroom teachers and specialists) administered a total of 88 IRIs to children in grades 1 through 6. Some of the IRIs were given in a clinical setting while others were administered in schools. Examiners were trained in using a holistic view to determine reading levels by considering four factors: word recognition in isolation, word recognition in context, comprehension, and behavioral characteristics. The IRI summary sheets (instructional levels only) were used to calculate percentages for word recognition (total miscues and significant miscues) and comprehension scores. On average, word recognition percentages ranged from 91% to 94%, thereby suggesting that the established 95% criteria for instructional level may be too stringent. Average comprehension scores at the instructional level met or exceeded the 75% acceptable criteria.

HODGES, CAROL A. (1990). Early reading assessment and teacher decision-making practices in kindergarten. In Nancy D. Padak, Timothy V. Rasinski, & John Logan (Eds.), *Challenges in reading* (pp. 43-51). Provo, UT: College Reading Association.

Derives information on the content, use, and relevancy of standardized reading readiness measures and tests of early reading ability. Kindergarten and first grade teachers from a suburban school district were interviewed to determine how teachers used the kindergarten test results. Prior to formal testing in early May, teachers placed their kindergartners (n=136) into three groups (high, middle, low) based on classroom observations. A comparison of the groups with test scores showed a significant relation between teachers' judgments and stanine scores. Tests administered late in the school year do not provide useful information for instructional or placement decisions. An analysis of nine readiness and early reading tests indicates that tests lack a focus on relevant skills and concepts and contain inherent design problems.

V-13 Technology and reading instruction

NEUMAN, SUSAN B., & KOSKINEN, PATRICIA S. (1992). Captioned television as comprehensible input: Effects of incidental word learning from context for language minority students. *Reading Research Quarterly, 27,* 94-106.

Reports a study of the word learning in English of 129 bilingual seventh and eighth graders from 17 classrooms in one middle school. Subjects were Cambodian, Laotian, Vietnamese, and Hispanic students identified as at risk on composite factors. Many had received little or no education in the past. All were enrolled in a transitional bilingual class, with the intent to mainstream the students into English as soon as possible. Subjects completed two pretests, one on vocabulary knowledge and one on prior knowledge of the science materials to be presented. During each of the 9 weeks, subjects completed measures of word recognition and recall of information. At the end of each unit, students completed sentence anomaly tasks. At study end, subjects took a multiple-choice test over word meanings. Intact classes were randomly placed in one of four groups: captioned TV, traditional TV without captions, reading along and listening to text, and textbook only. In the television conditions, subjects watched science segments of *3-2-1 Contact.* In the reading along and listening condition, students read silently as other students read aloud. In the textbook only condition students read and completed textbook exercises. The group receiving captions scored significantly higher than the reading text group or the regular TV group on both word meaning and unit tests, although degree of significance varied with the unit taught. Factors accounting for the differences are examined. Advantages and disadvantages of using captioned television for word learning are included.

KOSKINEN, PATRICIA S.; WILSON, ROBERT M.; GAMBRELL, LINDA B.; & JENSEMA, CARL J. (1991). Captioned video technology and television-based reading instruction. In Suzanne F. Clewell (Ed.), *Literacy: Issues and practices* (pp. 39-47). Bethesda, MD: State of Maryland International Reading Association Council.

Studies the use of model captioned video reading lessons by seven teachers and their 45 LD pupils in two phases. Children ranged in age from 8 to 13 and were reading at levels ranging from first to fourth grade. All participants were from three schools in a large Maryland public school system. The study was conducted in two phases; teachers were trained in procedures for both phases of the study. In phase 1, teachers taught eight model reading lessons over a 5-week period to a group of LD children in their classrooms. To assess teacher use of model lessons, the teachers were observed and evaluated by experienced teachers. In phase 2, teachers developed their own TV reading lessons and taught them over a 5-week period to the same children. Again, teachers were observed, and their teaching was evaluated. Teachers also completed both self-evaluations of each lesson and a general evaluation after the last session. In addition, they asked pupils to evaluate captioned TV by completing a short questionnaire which was read to them. Descriptive procedures were applied to analyze the resulting data. It was found that teachers with a minimum of training could effectively use and independently develop model captioned video lessons. Objective evaluations by trained observers indicated the high quality of teacher-designed lessons and the equally high level of pupil motivation and on-task behavior. Both teachers and children were enthusiastic about the use of video materials.

MAGUIRE, KENNETH B.; KNOBEL, MARIA-LOUISA M.; KNOBEL, BRUCE L.; SEDLACEK, LOWELL G.; & PIERSEL, WAYNE C. (1991, July). Computer-adapted PPVT-R: A comparison between standard and modified versions within an elementary school population. *Psychology in the Schools, 28,* 199-205.

Reports the administration of the PPVT-R to 112 elementary school children in both computer-automated and standard formats to determine if test results would be comparable for both formats. The two versions were given in counterbalanced order, with administrations occurring in the same test period with an intervening short break. For the adapted form, transparencies were held in front of the monitor, and pupils moved the cursor to select the answer. The directions specified in the test manual were used for the standard presentation. Differences in overall standard score means for both versions were not statistically significant. Range of scores, means, and standard deviation were similar for both forms. Overall correlation coefficient between the two administrations was .91. Of the 85 subjects asked to indicate which form of the test they preferred and why, 78% indicated they preferred the computer-assisted assessment. Overall results support the conclusion that the two versions of the PPVT-R are equivalent.

WEPNER, SHELLEY B. (1992, April). "Real-life" reading software and "at-risk" secondary students. *Reading Horizons, 32,* 279-288.

Compares the effects of using real life reading and skill-based reading and writing. Participants in this yearlong study were 73 eighth grade students from an innercity school. After being classified as above average, average, or below average on the basis of performance on the CAT, students in each classification were randomly assigned to either the experimental or the control group. Within small groups, students met in a computer lab for 40 minutes per week during reading time. Students in the experimental group worked with stories from a software package that used a DRTA framework built around three real life themes. Students in the control group worked with reading skill-based software and test preparation software. Both the experimental and the control group had 20 sessions in the computer lab. Pre- and postmeasures administered to all subjects included alternate forms of the GMRT (levels 7-9), the writing section of the New Jersey statewide High School Proficiency Test (HSPT), and a teacher designed survey of students' attitudes toward and interests in reading and writing. The latter assessment also probed students' self-perceptions as readers and writers. ANOVA procedures applied to each set of data indicated that students taught by experimental software felt significantly better about their work with the computer and about themselves as readers and writers. There were no differences between the experimental and control group on the GMRT; when CAT scores were used as a covariate, the below average students in the experimental group did significantly better. Experimental and control group scores on the posttest writing samples of the HSPT were not significantly different.

MCGOLDRICK, JACQUELINE A.; MARTIN, JACK; BERGERING, ANTHONY J.; & SYMONS, SONYA. (1992, March). Locating discrete information in text: Effects of computer presentation and menu formatting. *Journal of Reading Behavior, 24,* 1-20.

Assesses the influence of presentation methods (computer versus printed page) and the presence or absence of a search menu in the front of the text on location of specific text information. Eighty students enrolled in an introductory psychology course were assigned randomly to one of four conditions: (1) textbook without menu, (2) textbook with menu, (3) computer with a restricted functions menu, and (4) computer with a flexible functions menu. Results of the SAT verbal subtest administered to all subjects ensured that the four groups were of equal ability. In each condition, subjects were asked to locate answers to six factual questions. Although timed, subjects were given as long as they needed to find the answers. One way MANOVA results indicated that computer search groups spent more time looking for answers and were less efficient in extracting information than were the printed text search groups. However, no significant difference was apparent in the amount of correct information located by the computer and text groups. Computer groups also chose to search the glossary more often than did the printed text group.

VAN DAAL, VICTOR H.P., & VAN DER LEIJ, ARYAN. (1992, March). Computer-based reading and spelling practice for children with learning disabilities. *Journal of Learning Disabilities, 25,* 186-195.

Examines the effectiveness of computer-based reading and spelling practice with learning disabled children. Subjects included 28 Dutch children with a mean CA of 9.7 who averaged 2 years below age expectancy on a standardized reading achievement test. Each subject was individually administered a computer-assisted reading pretest of 42 hard to read and 12 easy to read words. They were then given 10-minute practice sessions using half the list on a computer for 15 consecutive school days. Words were practiced under three conditions: reading from the computer screen, copying from the screen, and writing from memory after presentation of the screen. Word sounds could be requested during practice. The computer maintained a record of pupils' learning behavior. Following completion of the practice days, a posttest of the 54 practiced and nonpracticed words was administered in both reading and spelling. Copying words from the screen led to significantly fewer spelling errors than writing words from memory; both forms of spelling practice resulted in fewer spelling errors than reading words only. No generalizations to words other than the ones spelled during practice were found. All practice forms were equally effective relative to reading.

COLLIS, BETTY; OLLILA, LLOYD, & OLLILA, KATHLEEN. (1990). Writing to read: An evaluation of a Canadian installation of a computer-supported initial language environment. *Journal of Educational Computing Research, 6,* 411-427.

Describes an evaluation of the first Canadian installation of the Writing to Read (WTR) program (begun in British Columbia in 1985), from the time of planning through the second year of full operation. WTR involves a multisensory learning environment (including computers) designed for first graders. Implementation issues and problems that were documented included initial difficulty with securing materials, equipment, and personnel to implement the program; determining responsibility for costs; and the teachers' perceptions of the program's inflexible procedures. Evaluation of the WTR experience on children's reading and writing achievement was accomplished by comparing class achievement data for the same two first grade teachers for the previous year (prior to implementation of WTR). Results indicated that the WTR experience had a positive impact on some aspects of writing achievement–specifically syntactic measures of writing achievement–but not on holistic measures. WTR was not associated with significant improvement in reading. Boys in the WTR program after 1 year were still significantly more likely to associate boys rather than girls with use of a computer. In general, parents' responses to the WTR stations were favorable, with parents (but not teachers) ranking the computer stations as most valuable for their child's language experience. The authors suggest that evaluation of the WTR system consider more extensive criteria than achievement scores, as well as flexible implementation of the program's components.

## V-14 Research design

DURST, RUSSEL K. (1992, February). Promising research: An historical analysis of award-winning inquiry, 1970-1989. *Research in the Teaching of English, 26,* 41-70.

Examines the history of research on the teaching and learning of English as reflected in the 20-year history of the Promising Researcher Award, which was established by the NCTE Committee on Research in 1970. Analysis of the research of 71 award recipients and 57 finalists focused on changes over time in the kinds of questions asked, topics addressed,

conceptual frameworks employed, and methodologies applied. Results revealed a strong but shifting influence of approaches borrowed from other disciplines including linguistics, sociolinguistics, cognitive psychology, anthropology, and literary criticism. Findings also suggested that the development of research has been characterized by the gradual discovery of a new area of interest and exploration and broader analysis of the area through a variety of approaches followed by a move to a new focus of investigation, with some researchers investigating more deeply the original area.

## *VI. Reading of atypical learners*

### VI-1 Visually impaired

COSLETT, H. BRANCH, & SAFFRAN, ELEANOR. (1989, August). Preserved object recognition and reading comprehension in optic aphasia. *Brain, 112,* 1091-1110.

Describes a patient with optic aphasia, a condition characterized by the ability to name from description and palpation but an inability to name visually presented objects. The condition is often considered to be a mild form of visual agnosia. The patient, a 67-year-old male, was diagnosed as having a left occipital lobe ischaemic infarction. Speech was fluent and well articulated with normal prosody and information content. Auditory comprehension and repetition were normal, but he was unable to name objects with visual presentation; with palpation, he named most of the objects. Performance was perfect on tests of auditory sentence and paragraph comprehension. Naming of pictures and visually presented objects was grossly impaired; naming of palpated objects, however, was good with eyes closed but performance deteriorated when eyes were open. The patient was asked to read aloud a corpus of over 400 words, none of which he could read. Visual processes underlying form discrimination and comparison were preserved. When asked to indicate whether a letter string was a real word, he was able to identify real words with 88% accuracy and to reject 66% of the nonwords. A second lexical decision test examined sensitivity to the legality of stem-affix combinations. He discriminated between unaffixed words and nonwords, but accepted more inappropriately than appropriately suffixed words. Another series of tests indicated that the patient was able to do auditory word-to-print matching with nouns but not with function words. In a test requiring him to match a written word to one of two pictures, he was correct on 47 of 62 trials. When asked to match a written word to one of four colored drawings, he was correct on 22 of 32 words. When the stimuli were auditory, he made a correct picture match most of the time. The results determined that the patient manifested the clinical syndrome of optic aphasia.

COSLETT, H. BRANCH, & SAFFRAN, ELEANOR. (1991, August), Simultanagnosia: To see but not two see. *Brain, 114,* 1523-1545.

Reports a series of investigations on a patient suffering from simultanagnosia, a disorder of visual perception characterized by the inability to interpret complex visual arrays despite preserved recognition of single objects. The patient was a 67-year-old female diagnosed with ischaemic infarction of the right parietal lobe. Her complaints were that her environment seemed fragmented; she could see individual items clearly, but was unable to note any meaningful relation among them. She could find her way in her home with her eyes closed but became confused with her eyes open. She could see only one person at a time on a television program. Reading of single words was normal. Neuro-ophthalmological examination showed corrected visual acuity of 20/40 in both eyes. Ocular movements were nor-

mal. She performed normally on a feature detection task, but she showed impairment on a test requiring her to distinguish between stimuli containing different numbers of targets. A visual-spatial orienting task showed no impairment. Briefly presented words and objects were identified as rapidly and reliably as controls, indicating that access to stored structural descriptions was not impaired. When two words or drawings were presented under brief simultaneous conditions, she identified both stimuli significantly more frequently when the stimuli were semantically related than when they were unrelated. It is suggested that her condition was attributable to an impairment in the process by which activated structural descriptions are linked to information coding the location of the object.

LEGGE, GORDON E. (1991, October). Glenn A. Fry Award Lecture 1990: Three perspectives on low vision reading. *Optometry and Vision Science, 68,* 763-769.

Reviews research, particularly that in which the author has been involved, dealing with reading and low vision. The research findings reviewed are placed in the context of three different perspectives: vision scientist, clinical researcher, and rehabilitation specialist. Vision scientists are interested in particular in the role of stimulus variables. In this area, the research findings reported indicate that low vision subjects require characters about five times larger than their acuity limits to read at their maximum rates. Clinical researchers take special interest in ocular variables such as the impact of reduced acuity, field loss, or other ocular factors on reading speed. In one study reported, it was found that individuals with age related maculopathy read only about half as fast as acuity-matched subjects with other forms of central vision loss. Rehabilitation specialists are interested in nonvisual variables affecting low vision reading. In this category, age has been found to be a more potent variable in low vision reading than in normal reading. However, it is noted that the age effect on low vision reading is not well understood. There would seem to be an interaction of unknown origin between age and the presence of low vision that depresses reading rate. It is concluded that an interdisciplinary analysis from two or more of the three perspectives will be necessary in understanding the critical issues of low vision.

WATSON, G.; BALDASARE, J.; & WHITTAKER, S. (1990, March). The validity and clinical uses of the Pepper Visual Skills for Reading Test. *Journal of Visual Impairment & Blindness, 84,* 119-123.

Attempts to determine the validity of the Pepper Visual Skills for Reading Test (VSRT) as a measure of reading ability with meaningful text. The VSRT was designed to measure reading among individuals with age-related maculopathy. It consists of a series of isolated letters and words. Subjects were 38 individuals ranging in age from 21 to 91. All subjects showed central field visual loss. Each subject read aloud one of three forms of the VSRT and one sixth grade passage from the GORT. Print adjustments were made appropriate to the visual acuity of each subject. Reading rates on the two measures were taken. The coefficient of correlation between rates on the two instruments was found to be .82. Reading rate on the VSRT accounted for 67% of the variability in reading aloud meaningful text from the GORT.

BERTELSON, PAUL; MOUSTY, PHILIPPE; & RADEAU, MONIQUE. (1992, March). The time course of Braille word recognition. *Journal of Experimental Psychology, Learning, Memory, and Cognition, 18,* 284-297.

Cites three studies examining whether the type of evidence that supports the on-line view for speech could be obtained for Braille word recognition by blind readers. Subjects in each experiment were blind French adults who were skilled Braille readers and numbered 12, 10, and 8, respectively, in the three experiments. Subjects were asked to read French nouns with the uniqueness point (the point within a word at which information theoretically becomes available for recognition) in different locations presented in unabbreviated Braille,

and then were to either pronounce each word or classify it as to gender. Reaction times were used as the measure demonstrating on-line lexical access. In Experiment 1 significant effects were obtained for Braille words in the two tasks. In Experiment 2, subjects demonstrated comparable relative uniqueness point effects for gender classification of Braille and of spoken words, indicating that on-line lexical access is not specific to speech. Experiment 3 demonstrated that the effect of the uniqueness point location is limited to the higher frequency words. Mean finger scanning speed did not differ between the pre- and postuniqueness point regions of the words.

KOENIG, A.J., & ROSS, D.B. (1991, May). A procedure to evaluate the relative effectiveness of reading in large and regular print. *Journal of Visual Impairment & Blindness, 85*, 198-204.

Develops and evaluates a procedure for gathering objective data on specific reading behaviors to determine the relative effectiveness of reading in large print and in regular print for pupils with low vision. Subjects were six low vision children, ages 9 to 14, who were mainstreamed to various degrees. Data were collected in large and regular print on four reading behaviors: oral reading rates, silent reading rates, working distance from the page, and miscues. Results are presented in individual profiles for each subject. The authors conclude that the approach was effective in providing information for determining the size of print most appropriate for individual children.

COHEN, JAY M., & WAISS, BRENDAL. (1991, October). Reading speed through different equivalent power low vision devices with identical field of view. *Optometry and Vision Science, 68*, 795-797.

Compares the reading speed of 32 trained, normal vision adults with four different forms of equivalent power optical devices: spectacles, hand magnifier, stand magnifier, and telemicroscope. Following a brief practice period with each device, each subject read aloud a baseline paragraph with best distance correction followed by one paragraph with each of the four optical devices. Testing was done monocularly. Paragraphs were equivalent fifth grade level passages from the GORT. Time required to read each paragraph was recorded and converted to words per minute. Subjects also were asked to rate the devices from most to least preferred. Reading speed with all four devices was significantly slower than the baseline reading speed with normal correction. Spectacles, hand magnifier, and stand magnifier were not found to have significant differences among themselves in reading speed. Rate with the telemicroscope was significantly slower than with the other devices. Order of preferences was stand magnifier, hand magnifier, spectacles, and telemicroscope, respectively.

ELDRED, KIA B. (1992, January). Optimal illumination for reading in patients with age-related maculopathy. *Optometry and Vision Science, 69*, 46-50.

Designs a study to determine optimal levels of illumination for patients with age-related macular degeneration (ARMD). ARMD patients represent about one-third of the low vision population in the U.S., with the incidence expected to increase due to the increase in the population of elderly. Subjects included 18 patients, ages 59 to 97 years, who had been diagnosed with inactive disciform or atrophic age-related maculopathy. Patients were asked to perform a simulated reading task in which groups of random letters and words were presented at six illumination levels. Number of correct responses per minute was calculated (CRPM), and the light level under which the greatest number of CRPM was taken as the optimal illumination level. In addition, patients were asked to read three paragraphs of sixth grade reading level material, one paragraph of which was read as a pretest at normal room illumination before optimal level was established. Of the other two, one was read at optimal illumination level and the other at room illumination. Print size appropriate for each patient

was determined and used, while reading distance was also determined for each patient. The findings suggested that optimal level of illumination was patient specific. Five patients had the most CWPM under the highest illumination level, while two patients had the most CWPM under the lowest illumination levels. Eleven of the 18 patients preferred higher illumination levels than normal.

## VI-2 Hearing impaired

DONIN, JANET; DOEHRING, DONALD G.; & BROWNS, FREDA. (1991, July/September). Text comprehension and reading achievement in orally educated hearing-impaired children. *Discourse Processes, 14,* 307-337.

Investigates oral text comprehension and reading comprehension in good and poor readers within a severe to profoundly deaf orally educated population. Two studies are reported. In Study 1, 48 prelingually deaf children, aged 7 to 18, served as subjects. All were enrolled in an oral-aural English language program in Ottawa and Montreal. Each subject had a folktale presented orally by one experimenter and were to retell it to a second person. Recall protocols were matched to the original text for propositional content and coded for recall and for text-based inferences. Based on scores from the Reading Comprehension subtest of the SAT, children were divided into those reading at about second grade level, those reading at about fourth to sixth grade level, and those reading above sixth grade level. The three types of text-based responses analyzed (recalled, forming the basis for inference, and recalled plus forming the basis for inference for each age group) all increased with age. Results for the better readers paralleled results previously found for normal hearing subjects. Poor readers demonstrated low levels of oral story comprehension. Study 2 compared older poor readers with younger subjects testing at the same reading level. Studied was children's comprehension of three written texts varying along two dimensions: narrative versus procedural structure, and fiction versus nonfiction. A subgroup of those in the first study served as subjects. Subjects read and then recalled each passage. Subjects at the same reading levels did not exhibit the same levels of comprehension. Results indicated that knowledge of reading level cannot be used to predict an individual's ability to acquire information from text. Characteristics such as age and linguistic experience affect familiarity with both text content and structure and must be taken into account.

ROBERTSON, LYN, & FLEXER, CAROL. (1991, Winter). Hearing impairment need not mean reading with difficulty. *Ohio Reading Teacher, 25,* 32-38.

Cites results of a questionnaire completed by 54 parents of children with a hearing impairment, all of whom had been taught to develop language through the Auditory-Verbal Approach. Children ranged in age from 6 to 19 years and were from all regions of the United States and from the Toronto, Ontario, area of Canada. Slightly over 80% had a severe profound or profound hearing loss with the rest showing a moderate to moderate-severe loss. All but one of the subjects were attending or had attended schools in which they were placed in regular classrooms; 44 were mainstreamed for all of their schooling. The average age for beginning to read was 5.3 years, with a range from 3 to 10 years of age. Twenty-three of the parent respondents indicated that their child read better than average; another 23 checked that their child read as well as average; 5 marked that their child read less well than average. All but 4 children were reported as doing some reading each week beyond their school work, and 76% were reported as liking to read.

KRETSCHMER, ROBERT E. (1989, September). Pragmatics, reading, and writing: Implications for hearing impaired individuals. *Topics in Language Disorders, 9,* 17-32.

Reviews the literature on the relations among language, thought, affect, and context and then discusses these areas and the research as they apply to the hearing impaired population. Literacy skills of hearing impaired individuals are discussed. Implications are presented for intervention based on findings from research.

LOMAGLIO, LARRY J. (1991, July). Using the TOEFL to measure the reading proficiency levels of deaf college applicants. *American Annals of the Deaf, 136,* 261-264.

Initiates a study to ascertain whether the Test of English as a Foreign Language (TOEFL) score of 400 to 425 equates to an eighth grade reading level. The TOEFL and the CAT were administered to 41 hearing foreign students. Subjects were classified into five categories depending on their TOEFL scores. Forty percent of the 33 subjects who attained a TOEFL score above 425 attained a reading score of less than eighth grade level on the CAT. The author recommends that the TOEFL not be used as the sole testing instrument to determine reading ability and general English language proficiency of hearing-impaired international students.

HANSON, VICKI L.; GOODELL, ELIZABETH W.; & PERFETTI, CHARLES A. (1991, June). Tongue-twister effects in the silent reading of hearing and deaf college students. *Journal of Memory and Language, 30,* 319-330.

Ascertains whether deaf college students use a phonological code in the silent reading of tongue-twister sentences. Subjects included 16 profoundly deaf college students, all of whom had deaf parents, and 16 hearing undergraduates. Two of the deaf students were subsequently dropped from the study due to inadequate performance on a number recall task. Stimuli consisted of 144 alveolar stop, alveolar fricative, and control sentences placed into three sets of 48 syntactically matched sentences, differing in the initial consonants of the content words. Half of the stimuli were semantically unacceptable, and half were semantically acceptable. Subjects saw one of two sets of five numbers, one set in which the numbers began with the alveolar stop and the second in which the numbers began with the alveolar fricative. They were then asked to read each sentence and decide whether it made sense; finally they were to recall the numbers. Half of the sentences were done with the number memory recall followed by 72 trials without the memory load. Data were analyzed to determine if performance on tongue-twister sentences differed from that on control sentences. All subjects made more errors on acceptability judgments for tongue-rwister sentences than for control sentences. More acceptability judgment errors occurred when the tongue-twister sentences and the memory load numbers were phonetically similar. Deaf subjects were faster but less accurate than hearing subjects in responding. It is argued that the findings indicate that a phonological code is used in silent reading by both hearing and deaf subjects.

PAUL, PETER V., & GUSTAFSON, GLENN. (1991, July/August). Comprehension of high frequency multimeaning words by students with hearing impairment. *Remedial and Special Education, 12,* 52-62.

Assesses and compares hearing and hearing-impaired students' comprehension of high frequency multimeaning words. Subjects included 42 hearing-impaired students, ages 10.7 to 18.11, and 42 normal hearing controls, ages 8.0 to 10.11. Hearing impaired subjects' scores on the SAT ranged from 1.8 to 9.5 in comprehension and from 0.2 to 6.5 grade levels in vocabulary. Word meaning was assessed by means of a 60-item, multiple-choice picture vocabulary test; of the 60 items, 45 required selecting two correct meanings. Hearing chil-

dren performed significantly better than did the hearing-impaired group. Both groups selected primary meanings more often than secondary ones. Both groups' ability to select two meanings of words did not improve with age. A coefficient of correlation of .54 was found between selecting two meanings and reading vocabulary for hearing pupils. For the hearing-impaired, the coefficient was .63. Coefficients between selecting two meanings with reading comprehension scores were .56 for hearing and .45 for hearing-impaired.

GRAY, COLIN; BANKS, JAMES; FYFE, RONALD; & MORRIS, ANNE. (1992, February). The use of verbatim and schematic strategies on the recall of written stories by deaf and hearing children. *British Journal of Educational Psychology, 62,* 88-105.

Researches the extent to which deaf children make use of schemata when reading stories. Participating in the study were 22 severely prelingually deaf children (mean CA = 11 years old) and two hearing control groups of 24 children each, one matched for reading level (younger hearing), and one matched for CA (older hearing). Children were presented with four stories to read, each of which varied from one to three episodes in length. For each story a set of corresponding pictures were presented in scrambled order and children were to arrange the pictures appropriately for the story structure. In addition, a modified cloze test and a memory-for-story-detail test were given following each story. Instructions were given using a sign system. Three of the stories had a similar theme while the fourth story had a different theme from the others. As much as possible, the same vocabulary was used across all four stories. Performance for any of the groups on picture arrangement was not impaired by increasing story length. Both the deaf and the older hearing group did poorest on the shortest story. The deaf group did best on Story 2 (two episodes), while both hearing groups performed better on the longest story. Hearing children performed significantly better than deaf children on the cloze test. Thus it appears that deaf children were reading and extracting and storing the main story line as were hearing children. However, deaf children did appear to use the presence of certain story features which hearing children did not.

## VI-3 Mentally retarded

LETCHMAN, HELEN; FINN, DAVID M.; & ALDRIDGE, JERRY. (1991, October). Environmental print as strategy for developmental literacy of young atypical children. *Perceptual and Motor Skills, 73,* 413-414.

Describes a literary program used with 12 children enrolled in an early childhood education class for the disabled. Children had been identified as educable mentally retarded, speech impaired, emotionally disturbed, and orthopedically impaired. The teaching strategy employed an in-depth study of a different letter of the alphabet each week, including visual, tactile, kinesthetic, and verbal firsthand experiences. Although data are not presented, it is reported that children's attention span increased, parents' participation increased, children's attitudes became more positive, there was more active participation in reading, and greater cooperation between home and school.

GAST, DAVID L.; DOYLE, PATRICIA MUNSON; WOLERY, MARK; AULT, MELINDA JONES; & FARMER, JACQUELINE A. (1991, July). Assessing the acquisition of incidental information by secondary-age students with mental retardation: Comparison of response prompting strategies. *American Journal of Mental Retardation, 96,* 63-80.

Compares the effectiveness and efficiency of four response prompting conditions used with four mentally retarded individuals, ages 15 to 19. Standard-Binet IQs ranged from

29 to 50. Stimuli consisted of 20 words related to recipes. Eight words were targeted for instruction through various pre- and posttest conditions. Students were taught the words in pairs in daily sessions 5 days a week. Response prompting conditions included progressive time delay, progressive time delay with descriptive verbal praise, system of least prompts, and system of least prompts with descriptive verbal praise. Maintenance and acquisition of incidental information was assessed when it was (1) embedded in the prompts of the system of least prompts procedure, (2) included in the descriptive praise statements following correct performance with the progressive time delay and system of least prompts procedures, and (3) not presented. Each of the four response prompting strategies was effective in teaching three students to read 8 recipe words and one student to read 4 words. Using traditional measures of efficiency such as number of trials, errors, and minutes of instruction time to criterion, no consistent advantage was found for any of the four instructional conditions. Incidental information was acquired, even though it was not directly targeted for instruction.

## VI-4 Neurologically impaired/brain damaged

GERMANI, MARY JO, & PIERCE, ROBERT S. (1992, April). Contextual influences in reading comprehension aphasia. *Brain and Language, 42*, 308-319.

Studies the effects of predictive and nonpredictive narrative contexts on reading comprehension of subsequent sentences by aphasic individuals. Subjects included 12 adults between the ages of 52 and 83 who exhibited aphasia as a result of a single left hemisphere cerebrovcascular accident. Of this group, 7 were designated as nonfluent and 5 as fluent based on an analysis of language samples from conversation and picture description and by two speech-language pathologists. Stimuli included reversible passive sentences presented in three conditions; (1) isolation, (2) preceded by predictive narratives, and (3) preceded by nonpredictive narratives. A fourth condition presented the predictive narratives without the reversible passive target sentences. Versions of the task were developed so that each sentenced occurred as a predictive narrative with a target sentence, a nonpredictive narrative with a target sentence, a predictive narrative without a target sentence, or in isolation. After reading each narrative, it was removed and subjects were asked to respond to a question pertaining to the action by pointing to one of two possible noun choices. It was found that aphasics comprehended the written reversible passive sentences better when they were preceded by either predictive or nonpredictive narratives than in isolation. Subjects did not comprehend the predictive narratives presented without the subsequent target sentences more accurately than they comprehended the target sentences presented in isolation.

MICELI, GABRIELE; GIUSTOLISI, LAURA; & CARAMAZZA, ALFONSO. (1991, May). The interaction of lexical and nonlexical processing mechanisms: Evidence from anomia. *Cortex, 27*, 57-80.

Reports a case study of a 45-year-old, right-handed male with no known history of LD but with increasingly frequent and severe seizures. Immediately following surgery, the patient was severely anomic, but his single-word comprehension appeared to be normal and comprehension of written and spoken text was impaired only mildly. The naming disorder was independent of input modality and resulted in an inability to respond to low-frequency items. The patient's performance on repeated administration of the same set of pictures for oral naming and for written naming indicated that both tasks were disrupted to a similar extent. The profile of the naming disorder was consistent with damage to phonological and orthographic output lexicons. However, the patient was able to read aloud words with lexically-assigned stress, and to write to dictation words whose spelling was also determined

lexically. The findings were interpreted as being consistent with the notion that phonological and orthographic output lexicons are distinct but interact with nonlexical conversion mechanisms.

HANLEY, J. RICHARD, & KAY, JANICE. (1992, March). Does letter-by-letter reading involve the spelling system? *Neuropsychologia, 30,* 237-256.

Presents a case study of a letter-by-letter adult reader in an attempt to evaluate two conflicting accounts of the compensatory strategies used in such reading. Previous research has indicated that letter-by-letter readers can be separated into two types. Letter-by-letter reading is defined as a form of acquired dyslexia in which patients appear to read single words by identifying one letter at a time. Type 1 are good spellers but have severe letter recognition difficulties. However, they are able to read words accurately when they can correctly identify the letters. Type 2 often are better at letter recognition than Type 1 patients, but often read words incorrectly even when the letters have been correctly identified. The case study presented is of a Type 2 reader whose spelling and reading seemed to be impaired in different ways. The patient was a 32-year-old male who had a right homonymous hemioanopia with sparing of the macula and a right hemiparesis with right hemianasthesia. Mild expressive dysphasia also was present. Tests indicated that reading and spelling were both impaired, but in different ways. Spelling errors consisted largely of phonological regularizations, while there were almost no regularizations among his reading errors. The latter were largely visual paralexias and letter misidentifications. It is argued that the patient does have lexical representation available in the spelling system, but it can be accessed only while reading and not while spelling. The pattern is explained in terms of compensatory mechanisms that access the reading lexicon.

PODOLL, KLAUS; SCHWARZ, MICHAEL; & NOTH, JOHANNES. (1991, June). Language functions in progressive supranuclear palsy. *Brain, 114,* 1457-1472.

Studies language functions in six patients with clinically diagnosed progressive supranuclear palsy. The patients, aged 59 to 76, were all native German speakers and conformed to the characteristic pattern of subcortical dementia. A group of ten healthy male volunteers, matched with respect to sex, age, and formal education, were used as controls. In addition to neurological and neuropsychological clinical examinations, all subjects were administered the following tests: multiple choice vocabulary, German version of the WAIS, and the Aachen Aphasia Test. Dysarthria, reading difficulties, and disturbances of handwriting were found in all patients but not in controls. Some patients exhibited other deficits such as visual dyslexia, constructional dysgraphia, and an increased rate of self-corrections and misnamings in object confrontation naming. Because naming errors in many instances referred to an object visually similar to the target object, it was felt that visual misperception was the major cause of the naming disorder.

FRIEDERICI, ANNGELA D., & FRAZIER, LYN. (1992). Thematic analysis in agrammatic comprehension: Structures and task demands. *Brain and Language, 42,* 1-29.

Reports a series of four experiments investigating the ability of aphasics to assign thematic roles during sentence comprehension. Experiment 1 included seven patients with Broca's aphasia and agrammatic output and five patients with paragrammatic output, four of whom were classified as Wernicke's aphasics. All patients had lesions in the left hemisphere; all were native speakers of German. A sentence-picture matching task was used to evaluate comprehension of different grammatical constructions. In Experiment 2, five of the Broca's patients and four of the Wernicke's patients for the previous experiment were employed as subjects. Again a sentence-matching paradigm was used, but this time subjects had to listen to the sentence in the absence of the relevant picture set. Broca's patients had

more problems in assigning the correct thematic roles in Experiment 2 than in Experiment 1. Wernicke's patients did not show the same decline in performance. In Experiment 3, the main verb was placed in the sentence final position, thereby affecting the performance of Wernicke's aphasics but not Broca's aphasics. In Experiment 4, subjects' verbal memory span was investigated under immediate and delayed recall conditions. Normal subjects were included as controls. Both groups of aphasics demonstrated verbal memory span decrease when compared to controls. The data are interpreted as supporting the view that the grammar of agrammatic aphasic patients is generally intact. Their behavior is attributed to a computational deficit which may be related to the patients' loss of automatic syntactic processes.

FROMM, DAVIDA; HOLLAND, AUDREY L.; NEBES, ROBERT D.; & OAKLEY, MARY ANN. (1991, September). A longitudinal study of word-reading in Alzheimer's disease: Evidence from the National Adult Reading Test. *Cortex, 27,* 367-376.

Conducts a longitudinal investigation of word reading ability in Alzheimer's disease. Subjects included 18 Alzheimer's patients and 20 normal elderly individuals. Test materials included a modification of the National Adult Reading Test (NART) in which a list of 30 words was selected for administration; a measure of word fluency; the Boston Naming Test; the Reading Subtest of the Western Aphasia Battery, two measures of recall (figure and story); and sets from Raven's Coloured Progressive Matrices to assess visuospatial perceptual function and nonverbal intelligence. Error responses to the 30 NART words were classified into one of three categories: real word, phonetically possible, and phonetically impossible. Longitudinal data on the NART and other neuropsychological tests were collected at yearly intervals. Data are reported for the initial testing and two subsequent years. At each test date, Alzheimer's patients pronounced significantly fewer words correctly than did the elderly controls. Alzheimer's patients showed significant decline in performance over time. NART scores were significantly correlated with dementia severity in Alzheimer's patients at final testing only, indicating that the NART is sensitive to dementia severity only at the later stages of the disease.

DIESFELDT, HAN F.A. (1991, August). Impaired phonological reading in primary degenerative dementia. *Brain, 114,* 1631-1646.

Profiles a patient with preserved and impaired capacities suffering from primary degenerative dementia of unknown etiology. The patient, a 56-year-old Dutch housewife, had lost the ability to read, to write, and to do needlework. She needed assistance in cooking, in dressing, and in doing simple household tasks. Eventually she was admitted to a psychogeriatric nursing home. Results of the neuropsychological investigations showed no motor or sensory deficits, and no visual or hearing problems. Calculation ability was severely disturbed. Many of her verbal statements lacked normal grammatical sentence structure. She showed severe difficulties with comprehension of spoken sentences. She was able to read some isolated words, but experienced severe problems in reading sentences. She could correctly read irregular words, but had difficulty reading pronounceable nonwords. Nouns and adjectives were read more easily than inflected verbs; she had difficulty reading function words. In reading aloud she made visual and morphological errors, but no semantic errors. The selective impairment of phonological reading in the context of partially preserved semantic abilities was interpreted by the author as a confirmation of the dissociability of language functions in primary degenerative dementia.

RAPP, BRENDA C., & CARAMAZZA, ALFONSO. (1991, August). Spatially determined deficits in letter and word processing. *Cognitive Neuropsychology, 8,* 275-311.

Describes the reading performance of a brain-damaged subject, a 62-year-old female who was an avid reader. Since damage to her brain following coronary bypass surgery, she

claimed that she had to identify most letters of a word, one at a time, before she could recognize the word. Reading response times increased as a function of word length for both horizontally and vertically displayed words. Lexical decision times for words and nonwords were similar. When allowed unlimited exposure duration to a word, the patient generally identified most of the letters in a word either audibly or subvocally before producing the word. When a letter error was made, the pronunciation was in keeping with the misidentification. High frequency words were read with greater accuracy than were low frequency words. Letter omissions and substitutions resulting in nonwords occurred on the right side of words. No semantic errors were made. Accuracy in recognizing letter strings that were spelled aloud to her was 77% for words and 65% for nonwords. Additional testing resulted in no evidence that the patient accessed the meaning of words she was unable to identify correctly. It was found that the patient was impaired in a number of nonreading tasks. The results are interpreted within a multistage model of prelexical visual/perceptual processing. The patients letter-by-letter reading performance is explained in terms of deficits at retinocentric and stimulus-centered levels of representation.

BAYNES, KATHLEEN; TRAMO, MARK JUDE; & GAZZANIGA, MICHAEL S. (1992, February). Reading with a limited lexicon in the right hemisphere of a callosotomy patient. *Neuropsychologia, 30,* 187-200.

Observes and reports the language system of a callosotomy patient. The patient, a female in her late 40s, had undergone a single stage callosotomy for intractable primary complex partial seizures seven years earlier. Observations made soon after surgery suggested that she had some limited reading in her right hemisphere but could not read rapidly enough to comprehend tachistoscopically presented words. While she could match a word with a picture presented to her LVF with some degree of accuracy, she demonstrated no comprehension of words displayed to the LVF. A series of five experiments were then undertaken to determine whether she could read in her right hemisphere. Results indicated that the patient could make some lexical decisions in the right hemisphere. The patient was only one of three in a series in which any right hemisphere language capacity had been demonstrated. The authors discuss the significance of studying such patients to aid in understanding the role of the right hemisphere in normal and dysfunctional language.

CARAMAZZA, ALFONSO, & HILLIS, ARGYE E. (1990, March). Where do semantic errors come from? *Cortex, 26,* 95-122.

Presents case study information from two brain-damaged adult subjects attending outpatient rehabilitation services at a large medical center. Subjects were tested on a variety of tasks to identify the locus of damage in lexical processing that give rise to their semantic errors. Both subjects made semantic errors in lexical production tasks involving speech production. Neither subject produced semantic errors in tasks involving writing or comprehension. Probability of semantic error was affected by semantic category and word frequency and grammatical class. Neither subject could read novel words and neither subject produced visual paralexias in reading. Subjects' patterns reflect an assumption of selective damage at the level of the phonological output lexicon.

HILLIS, ARGYE E., & CARAMAZZA, ALFONSO. (1991, December). Deficit to stimulus-centered, letter shape representations in a case of "'unilateral neglect.'' *Neuropsychologia, 29,* 1223-1240.

Describes a brain damaged female subject whose pattern of performance in different reading tasks is explained by attributing it to damage at a level of the word recognition process in which a representation with stimulus-centered, rather than retinal- or word-centered, coordinates is processed. The subject, age 57, had completed ninth grade and had

sustained a stroke prior to the case study in which there was damage to the right parietal-occipital region. The patient was asked to read aloud more than 2,000 words and pseudo-words designed to identify the effects on accuracy and error types of various orthographic and lexical dimensions of stimuli, topographic transformations of print, location on the page, and spacing between letters. Her errors were predominantly on the left half of words, irrespective of word length. Format and type of stimulus input affected her performance. She made essentially equivalent numbers of errors in all positions of words in vertically printed stimuli, and she made errors at the end of words in reading mirror-reversed stimuli. She did not make spatially-specific errors in the recognition of aurally spelled words. Adding a prefix narrowed the probability that she would make an error on the stem, but adding a suffix increased the possibility of such an error. Reading performance was not affected by the physical location of words on the page; however, word length and spacing between letters did affect reading. The findings are interpreted and discussed in terms of a model of visual word recognition proposed by the authors.

BISIACCHI, PATRIZIA S.; CIPOLOTTI, LISA; & DENES, GIANFRANCO. (1989, May). Impairment in processing meaningless verbal material in several modalities: The relationship between short term memory and phonological skills. *Quarterly Journal of Experimental Psychology, 41A,* 293-319.

Studies phonological processing abilities in a patient who had suffered focal brain damage, which was followed by selective impairment in nonword reading, writing, and repetition. There also was a short term memory deficit specific for auditorily presented verbal material. The patient, a 24-year-old Italian female, had attended school for a total of 8 years. She was presented with a list of 80 words and nonwords in both the written and auditory modalities. Her performance in each modality was perfect. When asked to read a list of 139 words, she read 135 correctly. However, her reading of a list of pronounceable nonwords was only 63% correct. Her performance was similar in writing words and nonwords. Her repetition of words was almost perfect, but she showed mild impairment for repetitions on nonwords. She was able to perform perfectly tasks involving phonemic manipulation and awareness. The data are interpreted as demonstrating that acquired impairment in nonword reading, writing, repetition, and immediate memory may occur in spite of good phonological processing abilities. Discussed is the role of short term memory in processing meaningless verbal material.

## VI-5 Other atypical learners

FEHRENBACH, CAROLYN R. (1991, Summer). Gifted/average readers: Do they use the same reading strategies? *Gifted Child Quarterly, 35,* 125-127.

Employs think aloud protocol analysis in comparing the reading processing strategies of gifted readers with those of average readers. Subjects included a random sample of 30 gifted and 30 average readers from a population of 300 eighth, tenth, and twelfth grade students. WISC-R and ITBS scores were used in identifying gifted and average readers. Students were met individually in two 1-hour sessions in which they were asked to verbalize their thoughts as they read aloud from five narrative passages, ranging from easy to difficult. Protocols were analyzed into 14 strategy categories. Differences between frequencies of strategies used by gifted and average readers were treated with ANOVA procedures. Gifted readers used six strategies significantly more than average readers: rereading, inferring, analyzing structure, watching or predicting, evaluating, and relating to content area. Average

readers used two ineffective strategies significantly more than gifted readers: word pronouncing concern and summarizing inaccurately.

HERTZOG, CHRISTOPHER; DIXON, ROGER A.; & HULTSCH, DAVID F. (1992, April). Intraindividual change in text recall of the elderly. *Brain and Language, 42,* 248-269.

Investigates the variability in story recall performance in seven females all over the age of 65. Text recall was assessed by administering 25 structurally equivalent texts, each containing about 300 words in 24 sentences. Stories all contained about 160 propositions presented in an approximately linear sequence and designed to incorporate plots relevant and appealing to older persons and with positive outcomes. Nine plots involved female protagonists, 9 involved male protagonists, and 7 involved couples as protagonists. Prior to beginning the study, baseline text recall performance was established using three texts. Subjects were tested weekly with most subjects receiving three complete administrations of the 25-story set. Recall was assessed by having subjects write within a seven-minute period what they could remember. Protocols were scored for propositions recalled; three additional measures of recall behavior also were obtained; macrostatements, elaborations, and metastatements. Large individual differences in overall recall performance were found. In addition, there was substantial intraindividual variation in performance for all subjects. Performance over time differed across subjects. Stories with female protagonists and gender-appropriate themes yielded better recall performance than did other tests.

FORNESS, STEVEN R.; SWANSON, JAMES M.; CANTWELL, DENNIS P.; YOUPA, DANIEL; & HANNA, GREGORY L. (1992, February). Stimulant medication and reading performance: Follow-up on sustained dose in ADHD boys with and without conduct disorder. *Journal of Learning Disabilities, 25,* 115-123.

Assesses the effects of methylphenidate on reading performance in 42 boys with attention deficit-hyperactivity disorder (ADHD). Subjects, ages 8 to 11, were selected during a 4-year period from referrals to a center which served children with ADHD (pure group) and another center which served children with a range of psychiatric disorders (mixed group); all were determined to respond to stimulant medication. Prior to selection, each subject was administered the following measures: WISC-R, PIAT, WRMT, and Key Math Diagnostic Test. Following initial trials for baseline, placebo, and three dosage levels, each boy's best dose from among three levels of methylphenidate was determined by response to a paired-associate task. Each subject was then maintained on his optimal dose for 6 consecutive weeks and then administered a test battery. A week after the medication was removed, alternate forms of the measures were given. Subjects were then returned to their optimal dose of medication for another week and again retested. Dependent measures involved accuracy and time to complete oral reading passages on the GORT and measures of time and accuracy on equivalent reading comprehension exercises. Subjects in the pure subgroup improved oral reading speed over the 6-week treatment period, dropped off the week when placed on placebo, and continued their progress when reinstated on the optimal dose. Mixed group subjects appeared to improve incrementally from each condition to the next, but the differences were not significant. Only subjects in the mixed ADHD subgroup improved their reading performance and only in correct answers to comprehension questions.

MUSEN, GAIL; SHIMAMURA, ARTHUR P.; & SQUIRE, LARRY R. (1990, November). Intact text specific reading skill in amnesia. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16,* 1068-1076.

Reports two experiments studying whether amnesic patients can acquire and retain text-specific reading skills. In Experiment 1, eight amnesic patients and nine normal con-

trols served as subjects. Participants were asked to read aloud, three times in succession, excerpts from two different short stories, each containing 20 lines of text. Reading times were recorded. Following the third reading of the second story, subjects were given ten three-alternative, forced-choice questions about each story. Reading time declined with the repeated reading of each story for both groups. For each group, the first reading of the second story took about the same time as the first reading of the first story. Controls performed better than amnesics on the questions about story content. In Experiment 2, the same eight amnesic patients and another group of eight controls were presented with excerpts from four short stories they were to read aloud three times in succession as in Experiment 1. A fourth reading was then scheduled at one of four different delay periods: immediately, 10 minutes, 2 hours, or 1 day later. Following the delayed reading, subjects were given a ten-item multiple-choice test to complete. Results of the first three readings were similar to those in Experiment 1. Results for both groups on the delayed readings indicated that reading speed gradually slowed across the four delays. Reading times for the fourth reading were significantly faster in the immediate and the 2 hour delay conditions for both groups as compared to reading times in the longer delayed conditions. Amnesics performed more poorly than controls on the multiple-choice questions. The authors conclude that facilitated reading speed is dependent upon both semantic and perceptual information and that such data can be supported by nondeclarative memory.

MAYES, ANDREW R.; POOLE, VIVIEN; & GOODING, PATRICIA. (1991, September). Increased reading speed for words and pronounceable non-words: Evidence of preserved priming in amnesics. *Cortex, 27,* 403-415.

Compares 12 amnesics with various etiologies with 12 matched control subjects on tasks examining increase in reading speed for lists of words shown several times. Materials consisted of lists of words and nonwords which were shown several times and read twice during a training phase. After a 4 minute delay the reading speed for the primed lists was compared with that for unprimed lists. No nonspecific practice effects were noted. Amnesics showed an equal proportional increase in reading speed for primed words list to that of their controls. Amnesics' reading speed for nonword lists increased slightly more than that of controls.

BIKLEN, DOUGLAS, & SCHUBERT, ANNEGRET. (1991, November/December). New words: The communication of students with autism. *Remedial and Special Education, 12,* 46-57.

Reports on the effects of facilitated communication, a method used to aid autistic children to unlock their ideas and to communicate through typing. Subjects were 21 children identified as autistic. Data collection included observations of children in their classrooms while not using facilitated communication; observations while using facilitated communication with a teacher, teaching assistant, or speech therapist in the classroom and/or in a speech therapy room; collection of typed output of children from such sessions; and videotaping of the children using facilitated communication in classrooms and therapy sessions. Facilitated communication contains the following elements: physical support, initial training introduction, maintaining focus, avoiding testing for competence, set-work, and fading physical support over time. Data were collected for over 6 months. Examples of children's written work are presented. Children showed unexpected literacy and numeracy skills. The authors conclude that their findings challenge traditional assumptions about the ability of autistics to analyze and use language.

HUGHES, JAN; WORCHEL, FRANCES; STANTON, SHARI; STANTON, HARRISON; & HALL, BECKY. (1990, Winter). Selective memory for positive and negative story content

in children with high self- and peer-ratings of symptoms of depression. *School Psychology Quarterly, 5,* 265-279.

Administers the Children's Depression Inventory (CDI) and Peer Nomination Inventory for Depression (PNID) to 322 sixth grade children and analyzes the patterns of children with high or low symptoms on either when recalling a story. On the CDI, 40 children scored in the top 13% and were classified as depressed, while 49 children were classified on the basis of their scores as nondepressed. The top and bottom 10% of children with scores on the PNID were classified as depressed (n=30) and nondepressed (n=32), respectively. A total of 38% of children were classified as depressed on both measures. Children listened to a story read to them as they followed along. The 700-word story, written for the study by one of the authors, included 10 positive and 10 negative events. Subjects were asked to recall in writing all they could of the story; a recognition test also was administered. ANOVA type procedures were performed for CDI and PNID groups for each memory task. Subjects with high depressive ratings tended to underrecognize negative events and tox overreport positive events.

## *Journals Monitored*
## *Annual Summary of Investigations Relating to Reading*
## *July 1, 1991 to June 30, 1992*

Action in Teacher Education
Adolescence
Adult Education Quarterly
Adult Learning
Alberta Journal of Education Research
American Annals of the Deaf
American Educational Research Journal
American Journal of Community Psychology
American Journal of Education
American Journal of Orthopsychiatry
American Journal of Psychology
American Journal of Sociology
American Journal on Mental Retardation
American Quarterly
American Sociological Review
Applied Psycholinguistics
Archives of Neurology
Arithmetic Teacher
Arizona Reading Journal
Arkansas State Reading Council
Australia & New Zealand Journal of Developmental Disabilities
Australian Journal of Education
Australian Journal of Psychology
Australian Journal of Reading
Australian Library Journal
Brain & Cognition
Brain & Language
Brain: A Journal of Neurology
British Journal of Educational Psychology
British Journal of Educational Studies
British Journal of Educational Technology
British Journal of Psychology
British Journal of Sociology of Education
British Journal of Special Education
Bulletin of the Psychonomic Society
California Reader
Canadian and International Education
Canadian Journal of Psychology
Canadian Library Journal
Canadian Modern Language Review
Canadian Psychology
Cartographic Journal
Child Development
Child Psychiatry and Human Development
Childhood Education
Children's Literature in Education
Clearing House, The
Cognition and Instruction
Cognition International Journal of Cognitive Science
Cognitive Neuropsychology
Cognitive Psychology
Cognitive Science
College and Research Libraries
College Student Journal
Communication and Cognition
Communication Education
Communication Monographs
Communication Quarterly
Communication Research
Comparative Education Review
Computing Teacher
Contemporary Education
Contemporary Educational Psychology
Contemporary Issues in Reading
Contemporary Psychology
Cortex
Council Chronicle
CSIL: Current Studies in Librarianship
Curriculum Inquiry
Developmental Medicine and Child Neurology
Developmental Psychology
Discourse Processes
Early Childhood Research Quarterly
Education
Education and Society
Education and Training in Mental Retardation
Education for Information
Education Libraries Journal
Education, USA
Educational and Psychological Measurement
Educational Gerontology: An International Quarterly
Educational Horizons
Educational Leadership
Educational Psychologist
Educational Psychology
Educational Research
Educational Research Quarterly
Educational Researcher
Educational Review
Educational Studies
Educational Technology
Educational Technology Research and Development
Elementary School Journal
ELT Journal
English Education
English for Specific Purposes
English in Australia
English in Education
English Journal
English Quarterly

ETS Developments
European Journal of Disorders of Communication
Exceptional Children
Florida Reading Quarterly
Foreign Language Annals
Forum
Forum for Reading
Gazette: International Journal of Mass Communications Studies
Georgia Journal of Reading
Gifted Child Quarterly
Harvard Educational Review
High School Journal
History of Education Quarterly
Human Communication Research
Human Development
Human Factors
Idaho Reading Report
Illinois Reading Council Journal
Imagination, Cognition, & Personality
Imprint
Indian Educational Review
Indiana Media Journal
Indiana Reading Quarterly
Instructional Science
Interchange
International Journal of Disability, Development, & Education
International Journal of Educational Research
International Library Review
International Research in Reading
International Review of Education
Interracial Books for Children
Intervention in School and Clinic
Iowa Reading Journal
Irish Journal of Education
Journal for Affective Reading Education
Journal of Abnormal Child Psychology
Journal of Advertising
Journal of Advertising Research
Journal of Aesthetic Education
Journal of American Optometric Association
Journal of Applied Behavior Analysis
Journal of Applied Behavioral Science
Journal of Applied Developmental Psychology
Journal of Child Psychology and Psychiatry
Journal of Classroom Interaction
Journal of Clinical Psychology
Journal of Clinical Reading: Research and Programs
Journal of College Reading & Learning
Journal of Communication
Journal of Communication Disorders
Journal of Counseling Psychology
Journal of Curriculum Studies
Journal of Education
Journal of Educational Computing Research
Journal of Educational Measurement
Journal of Educational Psychology (USA)
Journal of Educational Psychology (W. Germany)
Journal of Educational Research
Journal of Experimental Child Psychology
Journal of Experimental Education
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory, and Cognition
Journal of General Psychology
Journal of Genetic Psychology
Journal of Learning Disabilities
Journal of Marketing
Journal of Marketing Research
Journal of Memory and Language
Journal of Mental Imagery
Journal of Multilingual and Multicultural Development
Journal of Negro Education
Journal of Psychoeducational Assessment
Journal of Psycholinguistic Research
Journal of Reading
Journal of Reading Behavior
Journal of Reading Education
Journal of Reading, Writing, and Learning Disabilities International
Journal of Research and Development in Education
Journal of Research in Childhood Education
Journal of Research in Personality
Journal of Research in Reading
Journal of Research in Science Teaching
Journal of Research on Computing in Education
Journal of School Psychology
Journal of Special Education
Journal of Speech and Hearing Disorders
Journal of Speech and Hearing Research
Journal of the Acoustical Society of America
Journal of Visual Impairment and Blindness
Journalism Monographs
Journalism Quarterly
Kansas Journal of Reading
Kappa Delta Pi Record
Kentucky Reading Journal
Language and Speech
Language Arts
Language in Society
Language Learning
Learning Disabilities Quarterly
Learning Disabilities Research and Practice
Library and Information Science Research
Library Association Record
Library Journal
Library Quarterly
Library Resources and Technical Services
Library Review
Library Trends
Lifelong Trends
Linguistic Inquiry

Linguistics: An Interdisciplinary Journal of the Language Sciences
Literacy: Issues and Practices
Mass Communications Review
Massachusetts Primer
Measurement and Evaluation in Counseling and Development
Memory and Cognition
Merrill-Palmer Quarterly
Michigan Reading Journal
Minnesota Reading Association Highlights
Mississippi Reading Journal
Missouri Reader
Modern Language Journal
Monographs in Language and Reading Studies
Monographs of the Society for Research in Child Development
Montana Reading Journal
Mosaic
National Association for Secondary School Principals Bulletin
Neuropsychologia
New England Journal of Medicine
New England Reading Association Journal
New Mexico Journal of Reading
New Zealand Journal of Educational Studies
News and Views
News Notes
News Research Report
Newspaper Research Journal
Ohio Reading Teacher
Oklahoma Reader, The
Optometry & Vision Science
Peabody Journal of Education
Perception and Psychophysics
Perceptual and Motor Skills
Perspectives
Perspectives in Education and Deafness
Phi Delta Kappan
Poetics
Poetics Today
Professional Psychology: Research and Practice
Programmed Learning and Educational Technology
Prospects: Quarterly Review of Education
Psychological Medicine
Psychological Record
Psychological Reports
Psychological Review
Psychology
Psychology in the Schools
Psychophysiology
Public Opinion Quarterly
Publishers' Weekly
Publishing Research Quarterly
Quarterly Journal of Experimental Psychology
Reader, The
Reading
Reading Horizons
Reading Improvement
Reading in a Foreign Language
Reading in Virginia
Reading Instruction Journal
Reading Professor, The
Reading Psychology
Reading Research and Instruction
Reading Research Quarterly
Reading Teacher, The
Reading Today
Reading: Exploration & Discovery
Reflections
Reflections on Canadian Literacy
RELC Journal
Remedial and Special Education
Research and Teaching in Developmental Education
Research in Education
Research in Higher Education
Research in the Teaching of English
Research Papers in Education
Review of Education, The
Review of Educational Research
Rhode Island Reading Review
Roeper Review
Scandinavian Journal of Educational Research
Scandinavian Public Library Quarterly
Scholarly Publishing
School Counselor
School Library Journal
School Library Media Quarterly
School Psychology International
School Psychology Quarterly
School Psychology Review
School Science & Mathematics
Science Education
Science of Reading
Sex Roles
Social Education
Sociology of Education
South Dakota Reading Council Journal
Southwest Minnesota Reading Council Newsletter
Spelling Progress Quarterly
Star of the North
Studies in Educational Evaluation
Studies in Second Language Acquisition
Support for Learning
System
Teachers College Record
Teaching English to Deaf and Second Language Students
Teaching Exceptional Children
Teaching Pre K-8
Technological Horizons in Education Journal
Tennessee Reading Teacher
Tennessee Teacher
TESOL Quarterly
Texas Reading Report
Texas Tech Journal of Education
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Theory and Research in Social Education
Theory into Practice
Topics in Language Disorders
Urban Education
Urban Review
Visible Language
Vision Research
Volta Review
Wisconsin State Reading Association Journal
Written Communication

## *Conference Proceedings and Yearbooks Monitored, 1991-1992*

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Attention and Performance: Proceedings of the International Symposium on Attention and Performance
Australian Reading Association Conference Proceedings
Claremont Reading Conference Yearbook
Literacy and Language in Asia Yearbook
National Reading Conference Yearbook
Proceedings of the Annual Conference of the Reading Association of Ireland
Proceedings of the Research Study Symposium (FRA)
Reading Education in Texas: A Yearbook of the Texas State Reading Association
Reading Research: Advances in Theory and Practice
Review of Research in Education (AREA)
State of Maryland Yearbook (IRA)
Teacher Education for Literacy Around the World
United Kingdom Reading Association Conference Proceedings
Yearbook of the American Reading Forum
Yearbook of the College Reading Association

# *Author Index, Annual Summary of Investigations Relating to Reading, July 1, 1991 to June 30, 1992*

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